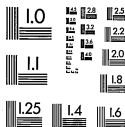




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# Thomas A Edison Papers

*A SELECTIVE MICROFILM EDITION*

*PART IV  
(1899-1910)*

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Thomas A. Edison Papers  
at  
Rutgers, The State University  
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18 June 1981

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The original documents in this edition are from the archives at the Edison National Historic Site at West Orange, New Jersey.

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**START**

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### **1909. Motion Pictures - Censorship (D-09-35)**

This folder contains correspondence and other documents relating to the activities of the Board of Censorship of Programs of Motion Picture Shows and its successor, the National Board of Censorship of Motion Pictures. Established in 1909 in response to a resolution passed by the Association of Motion Picture Exhibitors of New York, the Board of Censorship issued rulings that were considered mandatory for all Association members. The National Board was established later that year under the auspices of a civic organization known as the People's Institute. Included are letters concerning the organization of censorship activities, deteriorating relations between the National Board and the motion picture manufacturers, and efforts to promote the use of motion pictures in the public schools. There are also numerous reports to the Motion Picture Patents Co. that "pass," "condemn," or require modifications in individual films. A sample of these reports has been selected. Among the correspondents are John Collier, secretary of the Board of Censorship; Walter Storey, censorship secretary of the National Board; Charles Sprague Smith, managing director of the People's Institute; Frank L. Dyer, president of the Motion Picture Patent Co. and vice president of the Edison Manufacturing Co.; George F. Scull, secretary of the Motion Picture Patent Co. and assistant to the vice president of the Edison Manufacturing Co.; Carl H. Wilson, general manager of the Edison Manufacturing Co.; and Horace G. Plimpton, manager of negative production in the Kinetograph Department.

Approximately 50 percent of the documents have been selected. The items not selected consist primarily of additional reports by the censorship boards and related correspondence.

*M. P. - Censorship*

## The Board of Censorship

### OF PROGRAMS OF MOTION PICTURE SHOWS

Temporary Offices: 318 East 15th Street

NEW YORK CITY, N. Y.

Phone 2411 Snyvesant

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Albert Shields Mrs. Josephine Redding

Joseph F. Dinicoll

Dr. O. I. Lamberger

Representing the Association of Motion  
Picture Exhibitors of New York State

N. Joseph Slicklen, Secretary.

March 15th, 1909.

*Recd*

TO MANUFACTURERS OF MOTION PICTURES

RECEIVED

MAR 18 1909

FRANK L. LUTHER

Gentlemen:-

*W. J. Fox*  
*W. J. Fox*

You are doubtless familiar through published accounts with the fact that a Board of Censorship has been established. This letterhead gives the composition of that Board. What authority, if any, the Board of Censorship has; how it will operate; and how it will benefit the moving picture business; can be told in a few words.

The Board of Censorship was created by civic bodies in response to a resolution passed by the Association of Motion Picture Exhibitors of New York. There is a Governing Board officially representing these civic bodies and the public schools, and a Committee on Censorship appointed by the Governing Board. All members of both Committees serve without pay, but the salary of the Secretary, the rent of offices, etc., is paid by the Association of Motion Picture Exhibitors.

The Association of Exhibitors has passed a by-law making the verdict of the Censorship Committee mandatory on all members of that Association. Failure to abide by the censorship will entail expulsion from the Association of Exhibitors. But the censorship does not rest on the shoulders of the

Exhibitors' Association, but on the shoulders of public opinion. It is the absolute purpose of the Censorship Board to eliminate obscene pictures and pictures of crime-for-crime's sake from the New York moving picture shows, and to get this result it will use all the force of public opinion, of law, and of City Authority. But we feel entire confidence that manufacturers and renters, as well as all exhibitors, will make the cause of the Censorship their own, because unless the business gains a public standing it will suffer a ruinous collapse in the near future.

It goes without saying that the censorship will be liberal, and it is a fact that the proportion of pictures which are objectionable is small. But it is the occasional offensive picture which falls into the hands of the police, arouses the protest of vigilance societies, is advertised in the newspapers, and brings the whole moving picture business in disrepute. This picture must be caught up before it is shown on the public screen. The way to get this result is to inspect the pictures before they leave the hands of the manufacturers. (Old pictures which are on the shelves of the renters will, of course, be inspected at the renters') The Censorship Board will deal not only with motion pictures but with illustrated songs and the vaudeville interludes seen in many shows. It will further operate to improve the building conditions, sanitary conditions, etc., of the shows, and will make known to the whole public and to the lawmakers that real improvement is in progress. The Censorship Board will entirely disregard any and all business rivalries that may exist in the moving picture field. It hereby invites all manufacturers to cooperate and to share the benefits of the censorship. A White List of manufacturers, renters, and exhibitors will be

advertised widely, and any firm on the White List will be free to capitalize that fact. No black list will be published as this is illegal. But the standards adopted by the Censorship Board in consultation with manufacturers, renters, and exhibitors will be enforced in an aggressive manner throughout New York.

It is expected that arrangements will be completed by the end of the week of March 14th. Before that time, a representative of the Censorship Board will visit personally each manufacturer.

Very truly yours,




Chairman, Executive Committee  
On Censorship.

P.S.

It is perhaps unnecessary to state the advantages, both general and direct, that will result from the censorship. The first advantage will be to lift the moving picture business in the estimation of the general public; this will mean an increased patronage to moving picture shows, in every neighborhood. In the same way the censorship will put an end to the hue and cry against moving pictures in New York, will substitute discriminating regulation for wholesale persecution, will operate to secure reasonable laws in place of the unreasonable laws which now operate to choke the business.

The individual manufacturer, renter and showman does not need to be shown how he can make use of the fact that his output is approved by the Board of Censorship. There is a positive side to the work now being undertaken; this lies in the fact that the time is at hand for introducing moving picture apparatus into the public schools, and the Board of Censorship will interest itself in bringing this about. There could be no corresponding disadvantages unless the censorship were narrow and unreasonable, and such a censorship would not last for a month.



(4/6/09)

Mr. Dyer:

I have received from Mr. Plimpton six copies of report of Board of Censors, for pictures shown March 30th, original of which I requested the Motion Picture Patents Co. to forward to Mr. Plimpton. Kindly advise me as to the different people to whom you think these copies should be given. I attach one copy for your information. I think perhaps other copies should be given to Messrs. Scull, Weber, McChesney and Farrell, they being the ones who usually see and criticise the new subjects received from our Negative Production Dept.

4/6/09.

C.H. Dyer.

16 copies -  
on Censors. send as  
you suggest. Done

Mullins  
P.S. attaching copies for  
your files.  
C.H. Dyer.  
4/7

[ENCLOSURE]

Mr. Dwight McDonald,

The Motion Picture Patents Co.,

City,

Dear Mr. McDonald:

March 30, 1909.

851

Following is our report on the pictures seen to-day:

The following pictures were approved outright:

The Life Dream of Napoleon- Empress Josephine.	Vitagraph.
Napoleon, The Man of Destiny.	Vitagraph.
A Rude Hostess.	Biograph.
Schneider's Anti-Noise Crusade.	Biograph.
The Road to the Heart.	Biograph.
Trying to get Arrested.	Biograph.
A Trip to the Wonderland of America.	Kalem.
Any Port in a Storm.	Kalem.
The Father's First Half-Holiday.	Edison.
Unappreciated Genius.	Edison.
A Cup of Tea and She.	Edison.
The Master of Black Rock.	Lubin.
Perseus and the Tom.	Lubin.
The Lost Melody.	Lubin.
Vercingetorix. (The Gaul's Hero).	Pathe.
The Schoolboy's	Pathe.
The Kiss of Judas.	Pathe.
Moscow Cold in Snow.	Pathe.
A Contemptible Thief.	Pathe.
Clarence and His Cigarette.	Pathe.
Ponto Runs Away With the Milk Cart.	Pathe.

The following pictures the committee objects to in whole or in part:

Theodore Yearns To Be A Tough. Pathe. This picture is condemned in toto. It is crime all the way through, and such humor as there is grows simply out of the crime.

The Orange Growers. This picture is somewhat debatable as a whole, but we do not object as a whole but recommend two changes:

[ENCLOSURE]

(4)

2. Mac Donald.

In the introduction of the picture where the villain insults the girl. Cut out the actual physical struggle between them, it is too grossly suggestive. This means sacrificing about five feet of film.

That part of the picture beginning at the moment the girl is dragged up to the house and released. She is then approached by the villain and repulses him; whereupon he orders her dragged up the stairs into the room at the second story, and follows her closing the door and stationing a sentinel outside. The suggestion--the demonstration-- of rape seems here to be objectionable and unnecessary. Eliminate this strip of film--about 30 feet--and the picture runs right ahead. Later the girl is seen emerge from the upstairs room, during the excitement of the attempted rescue, but the audience may assume that she was merely imprisoned there. Eliminating as we suggest, you render the picture comparatively innocuous. Only comparatively, however, the motive-power of the film is criminal passion, and the rough handling of the white girl by negroes will be offensive to some. But we do not protest against the film as a whole, recognizing that improvement must be gradual. I should say that we will be progressively in favor of getting away from this kind of subject handled in this manner.

Very truly yours,

April 23rd, 19 09 .

Motion Picture Patents Company,

80 Fifth Ave.

New York City.

Gentlemen:

Four Pathe pictures were to-day submitted to the Censorship Committee for re-consideration. "Cartouch," "Bruised Heart," "Child's Love," and "Derniere Conquete."

All of these pictures except the last are colored pictures, and we were informed that copies, printed in France, had been ordered prior to our censoring these pictures, and that to cut them out completely would cause considerable loss.

We re-considered the pictures, with the following results:

"Cartouche" was passed favorably in the form seen to-day. This was not because the Committee had changed its opinion since first seeing the picture; but the cutting had been judiciously done and had obviously rendered the picture much less objectionable, while on the artistic side it had always been admitted to be admirable. Yet the Board of Censorship Committee runs the risk of criticism that it will be hard to answer in approving this picture, and this is true of some of those mentioned below.

"A Child's Love" This picture has already been cut to the extent of a few feet, and this meets the requirements of the committee in case in addition the picture be cut for two or three feet more, at the scene of the stage: in such manner as to make the scene briefer. Out at the point where the dancer turns her back to the audience and then again faces the audience and hints at a display of legs.

"Bruised Heart" The Committee had previously suggested the elimination of the scene of the attempted suicide. The picture was resubmitted because the Manufacturer felt that the suicide scene was not of a sort dangerously suggestive, and because the entire picture had not been condemned, yet to cut out this scene was virtually to destroy the entire picture.

The Committee very hesitatingly gives its assent to this picture. It deals with fidelity and with suicide, together, and both are themes severely criticised by those very sections of the public which the motion picture interests are trying to win over to a favorable attitude. If the Committee is called to account for passing this picture favorably it will hardly be able to defend itself convincingly.

Yet, as argued the theme is rather unreal and the cruder moral requirements are met by it. These considerations would not alone convince the committee, but as the film is a film d'art, and as copies are already ordered, the committee passes it favorably. In the future it is likely that this subject, treated in this way, will be condemned.

"Derniere Conquete." This picture had not been previously passed on by the Committee as a whole. The Committee will pass it favorably if the following changes are made .

Cut out the scene at the telephone (where the woman makes an assignation with the burglar . This applies both to the woman at the telephone and the burglar at the other end .

Cut out the scene where the woman waves to the lover with the lamp and cut out that portion of the scene in the woman 's parlor where she occupies a place on the burglar 's lap. None of these scenes, save the last are vulgar in themselves, but the theme is one of assignation and the object of the Committee is to ~~MINIMIZE~~ minimize this element and to allow the somewhat humorous (and harmless ) scene of burglary which follows ( ! !)

Yours very truly,

John Collier.

Secretary, Board of Censorship.

4/23

MEETINGS OF THE BOARD OF CENSORS.

Present:

Biograph:

Mr. Marvin  
Mr. Hamer.

Mr. Driscoll.

Mrs. Redding.

Mr. Collier.

Mr. Shields.

Mr. O'Shea.

REPORT OF THE BOARD OF CENSORSHIP

ON FILM SHOWN APRIL 23rd, 19 09.

The following pictures were passed favorably:

Biograph:

One Busy Hour.  
A Baby's Shoe.

Edison:

Tugs and Feather's.  
The Doctor'd Dinner Pail.  
Pony Express.  
A Somnambulistic Hero.

Lubin:

Inventions of an Idiot.  
Why the Mail Was Late.

Selig:

Chinatown Slavery.  
Adventures of a Keg.  
Bad Lands.  
Mephisto and the Maiden.

The following pictures were condemned:

A number of Pathe pictures were submitted for re-consideration. Report on these pictures is given on accompanying page.

The Edison picture "Lunatics in Power" was not decided on, though twice witnessed. The Committee would like to see this picture on Monday.

4/27

MEETING OF THE BOARD OF CENSORS.

Present.

Kleine. Mr. Willis.

Mr. Collier.

M. P. P. Co. Mr. Slicklen.

Mrs. Redding.

Mr. O'Shea.

REPORT OF THE BOARD OF CENSORSHIP

ON FILM SHOWN APRIL 27th, 19 09 .

The Motion Picture Patents Company,  
New York City.

Gentlemen:-

The following pictures were approved in toto:

Lubin:

Puzzle Mad.  
The House of Terror.  
The Falling Arrow.  
Boys Will be Boys.

Kalem:

Good for Evil.

Essanay:

A Mexican's Gratitude.

Vitagraph:

For Her Country's Sake .  
The Infernal Machine.  
The False Accusation.  
Dime Novel Dan .

The following pictures were condemned in toto or passed in an altered form.

Edison.

Lunatics in Power. This picture impressed the Committee as in rather bad taste throughout, dealing as it does with the most tragic of infirmities. But it is farcical and the plot is humorous, and the Committee approves the picture except for one scene. This is the scene. "The Lunatics at Breakfast." This is the only scene that is realistic. It has no relation to the plot and cannot be defended as mere farce comedy. There is a difference between ridiculing the insane (as in the breakfast scene) and putting the same into a ridiculous position by means of the insane (as in the rest of the picture.)

Two Pathe pictures were re-submitted, having been cut:

The Gambler's Honor. This picture was condemned ~~EXHIBIT~~ in toto at the first inspection. It represents a gambler and a vulgar wife who takes revenge by drinking herself into utter drunkenness in a public cafe. The picture has been cut from that moment where the wife, seated at the table next her husband's in a cafe, has four or five

# 4  
absinthes put before her; that is, the process of getting drunk is not shown. The picture remains pointless and without any good qualities, but the worst has been eliminated, and the Committee is informed by Pathe Freres that some loss would be caused by the total condemnation of the picture, the Committee is wall for it to pass through.

Nobody Wants the Basket.

This picture was previously condemned in toto, and is again condemned in toto. It is a thing of evil odor, moral as well as physical, throughout, and the American audiences ought to be saved from it. Not only the vulgar treatments of the evil-smelling incident of the basket, but the obvious character of the woman (a prostitute) and of the man (a rake) renders the picture unfit for the American public.

Yours very truly,

John Collier.

Secretary, The Board of Censorship.

THE BOARD OF CENSORSHIP REPORT.

April 30th, 1909.

The Motion Picture Patents Company,  
City.

Gentlemen:

Following is report on pictures seen at your office to-day:  
Passed with approval:

Vitagraph:

Tobacco Making, et seq. (Tobacco Dream)

Biblicals.

Solomon's Judgment.

Jephtha's Daughter. Note:-It is asked that this film be held in suspense for a day pending further formal notice and its treatment is unimpeachable, but discussion was raised as to the Biblical accuracy of the story as here presented. It seems that this is a delicate point with the Orthodox Jews. (The question involves the final of the picture-the sacrifice.)

Bison:

The Child's Prayer.

The Curfew Bell.

The Sandman :

Seize A Pin(He sees a Pin)

Lubin:

The Old Hall Clock.

Biograph:

Elopement of Auntie.

The Jilt.

Resurrection.

Kleine: (Urban-Eclipse.)

The Peddler's Reward.

Forgotten.

Pathe:

Pierrot Fuddler.

Petits Pifferoires. (Little Street Singers)

Kalem:

The Girl Spy.

Trapped.

It is asked that the following picture be re-submitted to the Committee on Monday, May 3.

Kalem: BACK FROM THE GRAVE.

The Bison picture, "Lunatics in Power" was witnessed again. The picture had been cut at the wrong place, and the part struck out was perfectly acceptable to the Committee, while the breakfast scene of the insane, to which the Committee had raised objections, had been left in.

The Committee discussed this picture at length, as it raised certain test questions. It was finally agreed that the attempt to approve the picture as a whole after the single scene above alluded to had been struck out, was not reasonable; the breakfast scene of the lunatic was little if any worse or in worse taste than the rest of the picture.

Being in doubt as to the principles involved in this question, the Committee decided to pass the entire picture, in its original form, favorably. They ask, however, that at the forthcoming meeting of the Governing Board, the picture be shown in order that it may be discussed and the Censorship Committee be instructed as to what methods of criticism to apply in the future to similar pictures.

Sheet #2

THE BOARD OF CENSORSHIP REPORT.

April 30th, '09

Therefore: The picture is approved; but the Committee does not regard itself as thereby establishing a precedent, or wish so to be understood.

Further note:-

The Committee desires to congratulate the several manufacturers on the excellent average of the pictures submitted to-day. Special comment along this line ought to be passed as to the pictures of each of the Manufacturers seen. Especially ~~REMARKABLE~~ notable, as it seemed, was the "Resurrection" of the Biograph Company, the Biblical pictures (treated in an adequate and dignified manner) of the Vitagraph Company, the "Old Hall Clock" of Lubin, Edison's "Child's Prayer," and others.

We would informally suggest the "Forgotten" of Kleine be given if possible the sub-title of "Enoch Arden," whose story it tells in a beautiful manner.

Yours truly,

John Collier.

Secretary, Board of Censorship.

**The Board of Censorship**  
**OF PROGRAMS OF MOTION PICTURE SHOWS**  
 96 FIFTH AVENUE, Cor. 15th Street  
 NEW YORK CITY, N. Y.  
 Phone 3843 Chelsea

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ADDRESS ALL COMMUNICATIONS TO THE SECRETARY

May 6, 1909.

Mr. Frank W. Dyer,  
 President, The Motion Pictures Patents Co.,  
 City.

Dear Mr. Dyer:

As I mentioned to you the other day, a movement in Philadelphia has resulted in the quiet organization of all the public bodies in that City with the original object of establishing a local censorship of moving pictures. I went to Philadelphia some days ago and pointed out the defects of their plan; urged that they become an auxiliary to a national censorship; and induced them to stand still and await developments.

Today I have received formal notification from the Philadelphia committee that they approve the plan as I outlined it. The Chairman of the committee has asked me for a full statement of the reasons why only a national censorship can get results and why the business interests will cooperate with a national censorship.

I enclose my reply to this request (copy.) This is confidential for the present. The letter is somewhat lengthy but I should appreciate your reading it carefully because the matter is of first importance.

If the way seems clear we ought to go ahead at once.

Very truly yours,

*John Collier*

[ENCLOSURE]

*For Mr. Dyer*

*{ Helen G. Warren  
Board of Censorship }*

May 6, 1909.

Mr. Robert W. Adams,  
The Central Branch, N.E.C.A.,  
Philadelphia, Penn.

Dear Mr. Adams:

Your letter came this morning; I am glad that the logic of the situation strikes you in Philadelphia as it strikes us in New York.

Since I saw you on Saturday last, there have been significant developments in the direction of a national censorship of pictures. The International Projecting and Producing Company, who are the most important factor in the "Independent" cause, have expressed their thoroughgoing interest in the plan, their desire to submit all their output for the entire country, and their willingness to contribute to the financial support of a national movement. <sup>+ see p. 3.</sup> No contributions can however be accepted from any manufacturer until all agree to contribute, and to contribute in an unconditional manner; for the censorship must be kept wholly free from obligations.

To one looking at the situation for the first time, it may seem strange that the "trade" has so cordially submitted to censorship. A word of explanation may be of value.

The moving picture is a deliberate and serious form of the theatre and is capable of becoming popular with all classes, rich and poor. To realize its full commercial possibilities, it must occupy a responsible

[ENCLOSURE]

2. Mr. Adams.  
position toward the public; must be sensitive to whatever is most universal and permanent in public taste. Millions are being invested in the business, and being no longer a get-rich-quick proposition but a business which must secure its position for future years, the moving picture trade has awakened to the force of public opinion.

The conditions are rather peculiar. Fundamentally, it must be remembered that moving pictures are produced in a wholesale manner, not only for all America but for the whole world. They are produced here and in various foreign countries, so that of necessity the producer is far-removed from his public. Yet in a common-sensed way, he desires to be as closely in touch with his public as he can; and this peculiarly in view of the fierce competition that rages in the moving picture field; competition between producing manufacturers.

But the moving picture output has been sensational in the past; probably not more sensational than the regular theatre, but the sensationalism has been more abrupt and evident and the public is resigned to the regular theatre. Therefore public opinion has taken on an antagonistic bias, in part justified, toward moving pictures. The dingy local conditions under which the pictures have been generally shown has contributed to this prejudice. In addition a peculiar fact must be taken into account: the regular theatres, controlling advertising and therefore publicity, have come to look on the moving picture show as their enemy, because its competition has hurt them seriously. The same is said to be true is a measure with the saloon interests. Altogether, the justifiable public prejudice, plus special and secret interests which are inimical to the moving picture, have resulted in a loss of great sums to the business, and in restrictive laws and in graft of all kinds. How is all this to be overcome?

First and last, by a censorship. And if the trade does not

[ENCLOSURE]

3. Mr. Adams.  
lend a hand, censorship will come anyhow, for the public is determined to regulate the shows; and the latter kind of censorship will be destructive rather than constructive and will vary in its standards with each locality, and will become an endless nuisance to the manufacturers of pictures.

Incidentally, it will not suffice to protect the public, for two reasons: the supply of pictures is national, they pass from place to place, they arrive today and are exhibited in twenty theatres tomorrow. Even ceaseless vigilance by a local censorship board will not suffice to keep the crude or evil picture out. And the kind of haphazard censorship which is alone possible locally, will fail to exert the reaction on the output of pictures--the stimulus toward better and better pictures--which is after all the most valuable part of a successful censorship.

Now compare this with the New York censorship, not merely as planned but as already operating. This Board works in close touch with the American manufacturers and the agents of the European concerns. It is wholly independent of commercial influence, yet maintains cordial relations with the controlling interests of the picture business. As a result, the things that are once pointed out as objectionable do not reappear; and the temptation which is ever-present with the producer of moving pictures, to fall back on sensationalism for his effects, is counteracted. In seven weeks, the time for which the New York censorship has been operating, there has been an improvement in tone and a heightening of artistic qualities in American-made pictures which is the subject of comment everywhere.

To sum up: this is the present situation: The Motion Pictures Patents Co., which furnishes about 60 per cent of the shows in America, is already applying nationally the verdicts of the New York board. The most important faction of the Independents will shortly do

[ENCLOSURE]

4. Mr. Adams.

the same. The minor Independents will be at once forced in self-preservation to make the local censorship national. This is in one way a triumphant result; in another way it is merely the logical result of the application of a business principle to the problem of censorship.

Meanwhile, the Censorship Board has gone ahead with the organization of that part of censorship which can only be local, as it deals with local conditions: the censorship of vaudeville etc. in the programs of the shows, the regulation of the physical conditions of the places, or the general conduct of the places. We have no specified legal rights in this direction, but we have public opinion which is more effectual; we can put an end to virtually anything that is really objectionable in any moving picture show. This power is enhanced by the fact that the censorship originated from the initiative of the local Association of exhibitors, who still provide the financial support of the entire work; they are prepared to expel from membership in their organization anyone who resists the censorship at any point.

Therefore: It appears to us that the censorship of motion picture shows must be worked out as follows: a National Board which concerns itself solely with National Censorship; local boards, which are represented on the national board and which take care of conditions peculiarly local and enforce locally the findings of the national board.

Thus there would be in New York (the strategical point) the National Board and a local auxiliary of this. The local auxiliary will gradually and naturally take on varied functions, and become a committee for the regulation of amusements in general.

Finally, for one or two details: The present composition of the Board of Censorship appears on this letter-head. Philadelphia, in organizing, would presumably choose as its representative one of the members of the Governing Board or Executive Committee, and this member would ipso facto become a member of the censoring committee which grapples

[ENCLOSURE]

5. ~~with~~ the actual problem of censorship. If Philadelphia( or any other City) preferred as its representative someone not now on the Board of Censorship, such representative could be placed on the Board. It would obviously be better that all Local Board should agree on the same representative; such a person for instance as Dr. Devine of the C.O.S., Mr. Edgar Winthrop, President of the Board of Education, Paul Kellog, editor of the "Survey," or someone already on the Governing Board.

I believe this covers the main points of inquiry . I enclose several copies of the Folder of the Censorship Board, which may be used to advantage.

Very truly yours,

*John Collier*

Secretary, Board of Censorship.

2 cards

894

Orange, N. J., May 7, 1909.

Mr. John Collier, Secretary,  
Board of Censorship,  
96 Fifth Ave., New York.

My dear Mr. Collier:

I thank you for yours of the 6th inst., enclosing copy of your letter to Mr. Adams, which I have read with a great deal of interest.

I do not think there can be any question but that a single well organized Board of Censors is far better than a great number of small irresponsible Boards scattered throughout the country and subject to local prejudices and influences. It would be difficult to imagine the effect on the business if our films were to be subjected to the censorship of committees in all of the cities in which they are exhibited. A more perfect scheme for the crippling of the industry could hardly be devised. Therefore, your proposition of a single National Censorship Board strikes me as being the only solution of the problem, admitting there must be a censorship, which I think everyone having the best interests of the business at heart must admit. Of course, the greatest care must be exercised in the selection of the Board, not to have it too unyielding, and to have its motives and personnel absolutely beyond the possibility of a suspicion. The people must have for it the same respect and confidence that they have for the courts, and when the Censorship Board appreciates its responsibilities I have no doubt as to its entire fairness. We must all

John Collier.

(2)

5/7/09.

know that it would be humanly impossible for the censors not to make mistakes, but we must always feel, as we now feel, that they are honest mistakes. No doubt many manufacturers whose films are criticised may think that particular decisions affecting them should not have been made, yet they will finally come to accept them in the same spirit that they now accept adverse decisions of our courts.

Personally I wish you success along the lines you have thought out, and I will be very glad whenever possible to give you any assistance in my power.

Yours very truly,

ELD/iww

President.

THOMAS A. EDISON,  
PRESIDENT

FRANK L. DYER,  
VICE-PRESIDENT & GENERAL COUNSEL

C. H. WILSON,  
GENERAL TREASURER

A. WESTEE,  
SECRETARY & TREASURER



## EDISON MANUFACTURING CO.

MAIN OFFICE AND FACTORY  
ORANGE, N. J.

### EDISON PROJECTING KINETOSCOPES AND FILMS.

TRADE MARK  
*Thomas A. Edison*

IN REPLYING ADDRESS THE COMPANY NOT  
THE INDIVIDUAL AND MENTION THESE INITIALS.

10 FIFTH AVENUE, NEW YORK.  
304 WABASH AVENUE, CHICAGO.

CABLE ADDRESS  
"KURILIAN, NEW YORK"

ADDRESS YOUR REPLY TO 41 East 21st Street

H.G.P. \_\_\_\_\_

*New York*, May 28th, 1909.

Mr. Frank L. Dyer, Vice-Pres.

Edison Manufacturing Co.,

Orange, N. J.

RECEIVED.

MAY 29 1909

FRANK L. DYER.

Dear Sir:-

I enclose a letter just received from Mr.  
Collier of The Board of Censorship, in which I  
thought you would be interested.

Dawley was very much chagrined when I told  
him about the sign "Keep Off The Grass." However,  
I find that no prints have yet been made beyond the  
first one of this picture, and I have arranged to have  
the sign altered in the negative so that it will not  
show. It is curious that no one noticed this when we  
saw the picture in Orange.

Yours very truly,

Edison Manufacturing Co.,

Kinetograph Dept.

*Margaret Langhorne*  
Manager Negative Production.

*Wm. H. Dyer*

[ENCLOSURE]

**The Board of Censorship**  
**OF PROGRAMS OF MOTION PICTURE SHOWS**

96 FIFTH AVENUE, Cor. 15th Street  
NEW YORK CITY, N. Y.

Phone 3843 Chelsea

Governing Board REPRESENTING CIVIC BODIES	EXECUTIVE COMMITTEE ON CENSORSHIP
Rev. Geo. William Knox, Chairman	John Collier, Chairman
The City Vigilance League, Matthew Ratte	Mrs. Josephine Redding Albert Shiele
The Ethical-Social League, Rev. George William Knox	Joseph F. Diocell
The Federation of Churches, Rev. Walter Laidlaw	Oscar L. Lamberger
The League for Political Education, Robert E. Ely	Representing the Association of Motion Picture Exhibitors of New York State
The Neighborhood Worker's Association,	
Howard M. Bradstreet	N. Joseph Slicklen, Secretary.
The People's Institute, Charles Sprague Smith	
N. Joseph Slicklen, Secretary	
	Thos. L. McClintock, Treasurer

ADDRESS ALL COMMUNICATIONS TO THE SECRETARY

EDISON CO. N. Y.

May 26, 1909

MAY 28 1909

KINETO D. P. A.

Mr. Plimpton,  
The Edison Co., City.

Dear Mr. Plimpton:

I must congratulate you on "The Legend of Sterling Keep." There isn't any doubt that this picture will be, perhaps not so sensationally popular as many pictures, but more genuinely interesting than any save a few. It is the kind of picture which will bring the people back.

But congratulations are easy. I had to laugh at one point. There, on the medieval lawn, with knights and ladies, minstrels and harps, a prominent "Keep Off The Grass!" sign. Couldn't this be eliminated?

Very truly yours,

*John Collier*

P.S. Another suggestion which I hesitate to make, but I believe you will welcome it: The conditions under which pictures are shown at the Patents Co. are well-nigh ideal, yet I had to get right under the screen to obtain a satisfactory view of the people's countenances. They are too small on the screen to be personalities. You'll notice, with an ensemble scene of French or Italian make, that there may be a crowd of people on the stage, yet a few, the central characters, are in the foreground and are satisfactorily visible; you can watch their facial

[ENCLOSURE]

2. Mr. Plimpton.  
play. . . When another of the crowd is to become the focus of attention,  
he too comes forward. This is true even of the regular stage; and has  
to be doubly true in picture pantomime, where the eye has to do the ear's  
work too.

But you have touched on the kind of vein which ought to be  
fertile.

very truly yours,

*Ben Holler*

PPS

*It never rains but it showers. The  
enclosed seems to bring out what our  
Committee felt (and you agreed) regarding  
the "Lunatics" sub-cover. J.P.*

*Philadelphia  
May 20, '09.*

THE EXHIBITOR'S GUIDE

"LUNATICS IN POWER" (C). Released by  
Edison, May 12 (one reel).

The board of censors, it seems, has passed this  
picture, the public will surely reject it. I do not  
want to use so strong a word as disgusting, but  
no other will do justice to the situation. To ridicule  
in moving pictures those unfortunates who have  
lost their reason, is nothing creditable nor will a  
normal-minded person ever see any fun in such pro-  
ceedings. To exploit the misfortunes of our fellows  
for any purpose whatever is a thing not to be  
tolerated. No exhibitor who has any regard for the  
taste or intelligence of his audience will allow such  
a reel to be put through his machine. The photog-  
raphy for the most part is decidedly bad.

AUTOMATIC REEF  
CENTRAL REEF

EXCLUSIVE IMPORTER OF  
GAYNOR & UHLEN-REDFORD FILMS  
FOR UNITED STATES

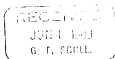
# GEORGE KLEINE

IMPORTER OF

MOTION PICTURES

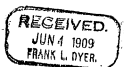
NEW YORK OFFICE  
602 SIXTH AVE.

CHICAGO OFFICE  
52 STATE ST.



Chicago, June 1, 1909.

Mr. F. L. Dyer,  
c/o Edison Mfg. Co.  
Orange, N. J.



My dear Mr. Dyer:

When I was in New York recently Mr. Collier of the Board of Censorship asked me to work up a series of programs for him to be used in connection with a public school movement next Fall. His plan was to have our rental office at New York rent these films to such theatres as the educational interests might engage for this purpose, inviting school children to attend.

Such programs should be as comprehensive as possible, and American manufacturers should be well represented. I intend to make up to begin about ten programs of four to six reels each, making a broad application of the term "Educational", so as to include industrials, scenic, geographical, etc.

Would you kindly send me a list of such titles as you can furnish which would come under this heading, referring either to films in stock or to available negatives?

I do not see any material profit in this proposition for ourselves, as our rental would have to buy these films, and would find no other use for them, but I believe that the plan is important, because of its tendency to elevate the business, and to interest a number of people who may be at present indifferent or opposed to moving pictures.

Your co-operation will be very welcome.

Very truly yours,

*G. F. Klein*

GE/MF.

*G. F. Klein*

## EDISON MANUFACTURING COMPANY.

M.P. - Gen,

June 15, 1909.

Mr. George Kline,  
52 State St.,

Chicago, Ill.

My dear Mr. Kline:

Your favor of the 1st inst. was duly received,  
and I give you the following list of available negatives with announce-  
ments from which satisfactory prints for your purpose could be secured:

5739 Emigrants Landing, Ellis Island	140'	Geographical
5365 Prize Geese, Newman's Poultry Farm	60'	Agricultural
5380 Ducks Bathing, Allentown Duck Farm	50'	"
6148 Blowing Bottles	100'	Industrial
6271 Shearing Sheep, Humala Farm	95'	Agricultural
6274 Hauling Sugar Cane, Kehola Plant, H. I.	125'	"
6281 Scenes on Sugar Plantation, H. I.	370'	"
6302 Trip Through Yellowstone Park, U.S.A.	735'	Geographical
6303 American Falls fr Goat Island, Niagara	55'	"
6304 Horseshoe Falls fr American Side	60'	"
6306 Horseshoe Falls fr Canadian Side	49'	"
6307 American Falls fr Canadian Side	70'	"
6309 Whirlpool Rapids, Niagara Falls	60'	"
6310 Cave of the Winds	185'	"
6318 Pano. of Culebra Cut	155'	"
6322 Old Market Place, Panama	120'	"
6333 Midnight Ride of Paul Revere	915'	Historical
6358 The Blue and the Grey, or Days of '61	1085'	Military
6362 Pioneers Crossing the Plains in '49	990'	Historical
6364 Boston Tea Party, The	1000'	"
6372 Aeroplane Flights of Henry Farman	200'	Scientific
6380 Pocahontas	1050'	Historical
6397 Colonial Virginia	975'	"
6404 Cocoa Industry, Trinidad, B.W.I.	880'	Industrial
6470 Buying Manhattan	360'	Historical
6463 Brothers in Arms	975'	Military

Unfortunately, we have no positives of these prints in stock,

George Kline.

EDISON MANUFACTURING COMPANY.

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6/15/09.

but since your object would no doubt go a long way towards popularizing moving pictures, I will be very glad to join with the other manufacturers in any proposition they might think should be made to you regarding this particular matter.

Yours very truly,

ELD/IWW

Vice-President.

RECEIVED.

JUN 15 1909

FRANK L. DYER.

June 15, 1909.

Mr. F. L. Dyer & Files:-

Have gone over with Mr. Porter the recent list of Educational films which I submitted to you, and the following are those that Mr. Porter thinks are suitable for the purpose and all of which have announcements:

#5739 Emigrants Landing, Ellis Island	140'	Geographical
5365 Prize Geese, Newman's Poultry Farm	60'	Agricultural
5380 Ducks Bathing, Allentown Duck Farm	50'	"
6148 Blowing Bottles	100'	Industrial
6271 Shearing Sheep, Humula Farm	95'	Agricultural
6274 Hauling Sugar Cane, Kohola Plant., H.I.	125'	"
6281 Scenes on Sugar Plantation, H.I.	370'	"
6302 Trip thro Yellowstone Park, U.S.A.	735'	Geographical
6303 American Falls fr Goat Isl., Niagara	55'	"
6304 Horseshoe Falls fr American Side	40'	"
6306 " " fr Canadian	40'	"
6307 American " " fr " "	70'	"
6309 Whirlpool Rapids, Niagara Falls	60'	"
6310 Cave of the Winds, " "	185'	"
6318 Pano. of Culebro Cut	135'	"
6322 Old Market Place, Panama	120'	"
6333 Midnight Ride of Paul Revere	915'	Historical
6358 Blue & The Grey, or Days of '61	1085'	Military
6362 Pioneers Crossing the Plains in '49	990'	Historical
6364 Boston Tea Party, The	1000'	"
6372 Aeroplane Flights of Henry Farman	200'	Scientific
6380 Pocahontas	1050'	Historical
6397 Colonial Virginia	975'	"
6404 Cocoa Industry, Trinidad, B.W.I.	880'	Industrial
6470 Buying Manhattan	360'	Historical
6463 Brothers in Arms	975'	Military

Regarding subject #6148, "BLOWING BOTTLES", it is possible we could get something better than this in the way of a special negative which we supplied for the Toledo Glass Co. some three years ago, showing the bottle blowing industry. It is quite evident that they did not make much use of this subject and we have the negative on hand at the factory, and if you think well of the idea, we could open up negotiations for obtaining the right to use this negative.

Referring to the Niagara Falls films, we have very few that are in good condition as you will note from the above list. Mr. Porter suggests that a man could be sent up to Niagara Falls district and take a number of short film subjects illustrating this section, and the entire set could be made in about one week; and he also thinks that passes could be obtained from The New York Central Railroad, which would also materially reduce the expenses.

Yours very truly,

KINETOGRAPH DEPARTMENT,

J. W. F.

*John F. ...*

ON FILM SHOWN JUNE 18th, 1909.

Gentlemen:-

The following were approved:

The Country Doctor.

Mr. Simpson's Attractions.  
Winning a Princess.

No Appetite for Dinner.  
Saved from the Flames.

Patho:

A Trip to Jupiter.  
The Man with the Dolls.  
Buffalo Racing at Maderia.  
The Vendetta.  
Napoleon--three reels.  
Deux Bons Amis.  
Roman de Jeune Fille Pauvre.  
Matche Enrage.  
Sanatorium pour Maigrir.

Casey's Jumping Toothache.  
Caught by the Coupon Craze.  
Mulligan's Waterloo.  
Egyptian Mystery.  
The Missionary and the Maid.

Drame des Charmettes. This picture is gruesome--shocking as a whole. The Committee will approve it if the following changes are made:

1. Cut out ~~XXXXXX~~ entire scene of actual poisoning (allow the woman to go to the house, but do not let her see the doctor, and to re-enter the house; eliminate from this point until after the dead body is removed from the room, and after the scene where the hypnotist attempts to make love to the woman over her husband's body. This virtually means cut out from entry of woman to house with poison, to the doctor's house, and the suicide at the end of the picture. Kindly re-submit picture.

M Le Maire est la Campagne. The Committee suggests that in the scene in the Mayor's office, where the many couples are together, about two feet be eliminated: at that point where the gendarme kisses one of the brides.

Visit to Riskra. Kindly re-submit this picture. The hesitancy of the Committee has relation to the dance at the end of this picture, but verdict is reserved.

In addition to the pictures named above seen for the first time, three Pathe pictures were shown for re-consideration. These pictures have been condemned in whole or in part some weeks ago, but the Committee was asked to make any allowances possible in view of the fact that many prints.

RECEIVED  
JUN 24 1909  
FRANK L. DYER

(2)

had actually been imported to this country.

After re-consideration the Committee reports as follows:  
Pompey's Dream. One scene had been condemned: The scene in Heaven of St. Peter and the wine cellar. This scene the Committee had felt might be taken as blasphemous by parts of the public, but when seen yesterday it appeared to be carried along by the farical spirit of the whole picture and to be inoffensive. The picture is approved in toto.

Getting even with Everybody. The Committee suggests that the following changes be made and the picture be re-submitted for further consideration. When servant-woman leads her lover out of parlor toward her bedroom, to convey that the bedroom is simply another adjacent room.

Strike out the progress of the husband in pajamas, up the stairs: his attitude at the outside of the servants door: all prior to his entrance to the servants room.

It is likely that the picture, in this form, will be passed-- with some regret, but the Committee desires to see it again.

Caught in His Own Trap. This picture is difficult to treat because the central incident has a setting of a kind designed to suggest only one thing, and this not presentable to the audience.

Kindly note the following change in the picture. Eliminate entirely the entrance of the wife and her paramour to the bedroom, and their scene in the bedroom. It would be better further to eliminate likewise the scene immediately preceeding this, when the wife discovers her husband as he lays the trap.

Kindly submit this picture again after changes have been made.

Very truly yours,

JOHN COLLIER,

Secretary.

M. P. - Censorship

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RECEIVED.

JUN 24 1909

FRANK L. DYER.

June 24, 1909.

Mr. Dyer:-

The attached manuscript from Mr. Bradlet is an attack on the present Censorship Board, especially in any attempt to make it a national one. I believe his views are entirely erroneous and biased by his own desire to get into the game. Certainly he badly confuses the idea of censoring films from a moral standpoint and criticising them from a standpoint of art or from a standpoint of what the public in general desires.

Certainly the suggestion that all film should be submitted for a general criticism to such of the Censorship Board that he proposes, in which the Independent and Licensed Manufacturers should sit together in judgment on each other's films, is vicious and unworkable. I would suggest that he be advised that we do not approve of his views but I do not believe it will do any good to go into any extended discussion of the matter with him, and certainly no harm can be done if he elects to publish the manuscript, since I think it carries its own condemnation.

G.F. S.

GFS/ARK.

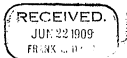
Wrote him, severely  
and temperately and  
will sign. By "vicious"  
don't mean whether you  
mean vicious or vicious,  
but the plan is probably  
both - Dyer - H.

[ENCLOSURE]

*Jno. M. Bradlee*  
159 W. 36th St., N. Y.

*M. P. - Censorship*  
New York, June 21st. 1909.

Mr. Frank L. Dyer,  
Orange, N. J.



Dear Sir:-

Please find enclosed a manuscript which I have prepared in an attempt to block the game of Mr. Collier of the N. Y. Board of Censorship, of forming a National Board.

I sincerely believe in a National Board but not under the present management of the N. Y. Board of Censorship.

Please return me the manuscript at your earliest convenience and let me know if you approve my views and in this case, if you would encourage me to go ahead with the work.

If you think advisable to have the manuscript sent to the Motion Picture Patents Co. you can do so.

Very respectfully,

*Jno M. Bradlee*

P.S. In this manuscript you will find that I advise the Board of Censorship to also point to the manufacturers such errors as I have pointed in some of your productions. If at any time you should decide to have an inspector to examine your pictures, I would like to have the work.

*Given -  
And carefully  
and then see  
me - Dyer*

[ENCLOSURE]

*Jos. M. Bradley*

359 W. 36th ST. N. Y.

TO THE MANUFACTURERS.

Gentlemen:-

In my report of 9 pages, on the N.Y. Board of Censorship, I show:

1:--That the too busy manufacturers have no time to inspect their productions or to go to moving picture shows.

2:--That the producers are so wrapped in their work, that they do not see their own blunders, no more than a mother cannot see the difformities in her new born, to her it is the best.

3:--That the manufacturers as well as the trade papers, lose sight of the question: "Who is giving the nickels?" Not the rich classes, we have no moving picture shows on the fashionable avenues for the rich.

4:--They lose sight that if we have to depend on the working classes for the nickels, said working classes do not know enough of Europe or of old Roman History or of ancient authors, to enjoy and understand the so called "High Art Films".

5:--Our working classes want some good subjects, some good acting but they want something that they can understand, something that can hold them in suspense from beginning to end, something that can either make them laugh or cry.

6:--Our trade papers do not consider these points and although knowing that most of the spectators yawn on their seats at such "High Art Films" as the Duke of Guise, they praise the manufacturers for the sake of the dollars they can get in advertisements. The public and the exhibitors are entirely shadowed by the \$ \$ \$ sign in advertisements.

7:--If the manufacturers want to devote their energies to "High Art Films" let them provide special houses for the rich folks, who can appreciate the high art and who understand the historic subjects. Personally I enjoy such "High Art Films" but I am not selfish, I think of the other fellows.

8:--It would be the duty of the trade papers to guide the manufacturers and not to mislead them, in constantly praising (for the sake of an adv) Highly Artistic productions, not understood by these giving the nickels.

9:--If the trade papers are in business to make money, the manufacturers, renters and exhibitors are not in business for mere love, they want to know what the public wants, they do not want to be misled by a lot of interested compliments.

[ENCLOSURE]

:10---The trade papers are short sighted. If they would frankly advise the manufacturers and take the interests of the exhibitors, they would give a new boom to the business, while this policy of "High Art Films" will mean a complete ruin. Folks who can enjoy and understand high art work, do not patronize the moving picture shows and those who patronize our 5¢ and 10¢ shows are not posted enough to understand the work.

-----

As I am on the side of the Licensed Manufacturers, I give you the first option on the following plans but if you refuse me your support, then I will have to see the independent side. Let us bear in mind that the good work will win. The public wants good clean pictures, acted and staged with great care but pictures that they can understand, as the moment they cannot follow the plot, they lose all interest.

-----

MY PLANS:-

If each Licensed Manufacturer, under the Motion Picture Patents Co. pays me a salary of \$20 per month, which would be \$180 for the 9 licensed manufacturers per month (salary paid by the M.P.P.Co) I will agree to:

- 1:---I will devote my time to the interests of said manufacturers.
- 2:---Each day I will visit different shows,,to study the audiences and see all the new licensed films as they are released.
- 3:---I will write my criticisms as follows:  
One the subject, the acting, staging, etc. impression on public.  
Each criticism on a special sheet. 4 duplicates One to go to the M.P.P.Co. as a record---One to go to the manufacturers of the film as a record---One to go to the producers of the film to show them their errors---One to go to me as my personal record.  
Said criticisms not for publication.
- 4:---I will agree to spend part of my time on the road, so as to study the wants of the public of other States. These trips at my own expense (except if I am called on a special long trip by a manufacturer)

I do not claim to be "the only one" but I have the good will, the ambition to see success, the desire to save and elevate the Industry. By my different examples, I show that I criticize without passion but with some common sense and some logic. Evidently on the road I will see some independent films and if they deserve any mention, I will send a report to the M.P.P.Co.

#159 West 36th. Street, New York.

Respectfully,  
Jno. M. Bradlet,

**[ENCLOSURE]**

Cor) - 422-

On such occasions as Lincoln's Birthday, Washington's Birthday, Decoration Day, Flag Day, 4th. of July, etc. the Church Workers and School Board Members, composing our New York Board of Censorship, make long and patriotic speeches, in which they never fail to show the great influence that mothers had on the lives of our great men, who made of this Republic one of the greatest nations.

It is true that all the men, who as Washington, Lincoln, Garfield, Le Kinley, etc. loved and respected their parents, are the men who respect their families, their employers, their fellow citizens, their country and their flag, men who have the sense of duty, men of real nationhood.

On another hand, the men who do not respect their parents, cannot respect their families, lose their employers and fellow citizens and have no use for their flag, except to use it as an advertising sign. You do not find the deeds of these men recorded in the books of our National History, as each deed are the ones filling our prisons.

The members of our New York Board of Censorship, seem to have a double policy. They pass and accept moving pictures teaching the reverse of what they are preaching in their patriotic speeches, and this under the excuse of strong moral lessons.

One of the accepted films, shows us an unnatural son. The old man turns his property, including a saw mill, over to a son. This son takes charge of the estate and because the father is not willing to give up every cent, the unnatural son beats him, throws him on the floor and robs him. When the old father is deprived of his saw mill, of his estate, of his home, of his savings, etc. the son calls in the poorhouse wagon, to take the old man away.

I fail to see any strong moral lesson in this film but I see a very deplorable lesson and if our young generation is taught to ill treat and rob their parents, Washington, Lincoln, Grant, Garfield, etc. will have no successors to continue the National History of this glorious Republic.

It is time that our U. Y. Board of Censorship should be called down on a number of films, which should have not passed the Board.

If you are interested in a movement to establish a liberal, fair minded and honest Board, to take the interests of the manufacturer and of the exhibitor as well as of the public, I will be pleased to call on you, if you can give me an interview and show you several papers on the question.

I am informed that the present H. Y. Board of Censorship is trying to infuse some new blood in their organization, by making it a National Board. Let be local, National, International, no Board can succeed if the members are not cool, sober, fair and liberal minded men. I do not believe that we should show a burglar at his professional tricks, yet I do not see why the film "The Lonely Villa" should be rejected by Chicago. In other words, the members of a Board of Censorship should be intelligent enough, to know when the sight of a night shirt is indecent or not and not reject a picture because a night shirt is shown on the screen.

159 W. 36th Street, N.Y. Jno. M. Bradlet.

Mr. M. Bradlet

[ENCLOSURE]

Gentlemen:-

In my efforts to have our N. Y. Board of Censorship, either placed under a more judicious management or reorganized, I have pointed two facts.

1st:----- We cannot have established rules, to say what should and what should not be exhibited, as everything is good or bad, according to the way it is shown. A murder, a burglary, a beheading, a hanging, a whipping post, etc. are not to be suppressed if such scenes are to illustrate some subjects and not shown with a morbid desire or for the sake of creating some sensational thrills.

In my opinion, bar room scenes, in which men are having a jolly old time, are far more dangerous than a scene, showing a burglar at his work. Men know that no matter how a burglar can be successful in several of his attempts, he generally lands in a prison cell. If a man can be tempted to commit a robbery, by witnessing on the screen the work of a burglar, this temptation disappears at the fear of a prison cell. The bar room scene is more dangerous, because it is a real temptation to find out what fun there is in liquor. There is no punishment in sight. It is true that many men go to jail, by committing crimes while under the influence of liquor, but the spectator relies on his force of character, to stop drinking before he reaches the dangerous limit.

In my opinion, a recent film is more dangerous than a burglary.

This film comes from Chicago but the Chicago Board, who is looking only for masked burglars, did not see the burglary in this film. When a burglar is caught, he is not sentenced on the value of the plunder. No. If he has already been sentenced as a burglar and is caught operating, even before he can get any plunder, he receives a heavy sentence, which in New York means "life". In the film in question, the Doctor's wife burglarizes the medicine closet---she does not get much---Cocaine---but cocaine to her means more than diamonds to burglars---she is caught---yet she makes a second unsuccessful attempt, then she robs the desk for a prescription. This film should be suppressed as the uncontrolled desire of the woman for the drug, proves that there is something worth having in Cocaine and this film can tempt many weak minded persons to find out what is this delicious sensation---and try a very, very small dose---and---etc

This is why I urge a Board composed of cool, sober, intelligent, far minded men, men with some experience in life, not narrow minded youngmen from Sunday school, who see in Cocaine a strong moral lesson. A moral lesson is desirable in each picture but we can show a good moral lesson. Look at this admirable film of Gaumont: 'The Good Hearted Policeman' is there not a strong moral lesson in it? The policeman is a father, he knows what is the love of parents---what a noble act when he changes the dollar. These are moral lessons that do some good, that impress, that elevate humanity.

My second point is on the selection of the subjects. In this I do not blame the manufacturers because they are not properly guided by the trade papers.

[ENCLOSURE]

If I was an editor, I would say: "Gentlemen:- We are perhaps more cultured than the patrons of moving pictures but as we all need the nickels of the masses, let us put aside our personal wishes, to cater to the wants of these who give us the nickels, let us please them and not force on them, our personal views. We can admire some old historic and Roman plays, but we must bear in mind that our millionaires are not so democratic as Mr. Anatole France or M. Clemenceau, who do not hesitate to sit with the common people to see moving pictures. Until we have special houses for the rich cultured classes, we cannot expect them to patronize our 5¢ and 10¢ shows. The proof that the rich classes are not the ones supporting the exhibitors, renters and manufacturers, is fully demonstrated by the fact that we do not find a single moving picture show on the upper Broadway or the fashionable avenues, crowded with theatres, hotels, restaurants, cafes, etc. Let us think of the men and women, working all day and who at night visit a show for a rest and a recreation. They want something to work their different senses, they want to either laugh or cry, they want something to arouse their feelings they want something that they can understand from beginning to end without the help of a lecturer. They do not want "High Art Films" that they cannot understand, they do not want complex situations, requiring too much hard brain work to make out, they do not want long sub titles, long difficult names that they cannot memorize. They want some good and clever acting but do not care for "High Art Films" if high art means films that they cannot understand. We must also bear in mind that if the subjects as "Mary Stuart"----"Louis XVI"----"Bonaparte & Josephine"----"Duke of Guise"----etc. are familiar to us, they are greek and latin to most of the spectators and THE MOMENT THAT THE SPECTATORS DO NOT UNDERSTAND THE SUBJECT, THEY LOSE ALL INTEREST. An illustration.

On June 22nd. I visited Keith's, the programme was as follows:

A LOST INVITATION- - - - - Edison  
THE TROUBLESOME LAMP POST- - - - - Gaumont  
A GOOD HEARTED POLICEMAN - - - - - Gaumont  
THE DUKE'S JESTER- - - - - Vitagraph

On account of special scenery, of special costumes and actors, The Duke's Jester must have been the most expensive production, with A Lost Invitation as a good second in the expense line. Even the Troublesome Lamp post, with all its damages must have been more expensive than the Good Hearted Policeman, yet the policeman was the hit of the evening. This simple touching and well told story, went to every heart and while the noble act of the policeman will remain in the memory of many of the spectators for months to come, the Lost Invitation, Duke's Jester and the Troublesome Lamp post will be forgotten in a few days. I feel confident that many men and women left the theatre to go and tell to their neighbors of this good hearted policeman, while they will have nothing to say on the other productions. I do not say that the Duke's Jester is not a good film. No. It is a production giving much credit to the manufacturers, but a film too complex for the average public.

The trade papers are near sighted. They do not guide the manufacturers, they shape their editorials to the tune of the dollars they

[ENCLOSURE]

can get in advertisements. An editor does not care for the public or the exhibitors, but he wants the advertisements of the manufacturers. He will see a film of Art, something complexe, with a lot of subtitles and long names to memorize, he will see the spectators yawning on their seats and dissatisfied, yet for the sake of getting a good advertisement from the manufacturer, he will run to his sanctum, to write a fine criticism, to praise the production and mislead the manufacturer in the wrong course. If the editor was not short sighted, he would call the attention of the manufacturer to these points and take more the side of the public. If our manufacturers continue this policy of showing us historic pictures that the public does not understand, under the excuse of films of Art, they will ruin themselves, as the tired public will patronize the shows and the richness classes will still remain absent.

Another mistake on the part of the manufacturers is to believe that they cannot show good acting except in "Tragedy". I cannot call Pathe's latest production "The Grandfather" a tragedy nor "The Foundling" of the Vitagraph Co. a tragedy, yet these two films of very recent dates are perfect.

Jno. M. Bradlet.

*Jno. M. Bradlet*

139 W. 35th ST. N. Y.

*M.P. - Censorship*

New York, June 25th. 1909.

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Edison Manufacturing Co.,  
Orange, N. J.

Gentlemen:-

I enclose a few more notes on my question of Censorship and also a proposition submitted to the Licensed Manufacturers.

I wish you would consider this proposition and see if it would not benefit the manufacturers.

This proposition is not to last for ever, as in six months, we should have enough records to know what is wanted and by the same time the producers would gain enough experience to avoid the mistakes of to day.

I do not blame the manufacturers nor the producers, the trouble is due to the rush for quick work.

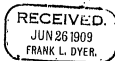
It is understood that I would also make it an object to question the exhibitors and their ushers, to get their opinions.

I do not condemn High Art Films: "La Tosca"---"Louis XVI"---"Duke of Guise"---"Oliver Twist"---etc. as personally I like such work, I enjoy every part of it but I have found by experience that the patrons of our 5¢ and 10¢ shows are not posted on history to enjoy these films but on the contrary, they praise "The Foundling"---"Hunted to the End"---"The Grandfather"---"Good Hearted Policeman"---etc.

Very respectfully,

*Jno M. Bradlet*

*Source*



[ENCLOSURE]

REMARKS:-

My main object was that as Mr. Collier is trying to infuse some new blood in his Board, by making it a National one, I wanted the manufacturers to take hold of the opportunity to have competent appointed for the new Board of Censorship.

Personally I have no grudge against Mr. Collier but in my opinion, he is not competent to hold such a responsible position. He seems to be too simple and too innocent to understand the passions of man. As a religious simple man, he is shocked at the sight of a night shirt, because it is a night shirt, he cannot see when a night shirt is admissible in a picture or when it is indecent. Mr. Collier has also some queer ways. He wrote an official letter to the independent manufacturers of the two films condemned in my letter, praising them for the high work. The said manufacturers were so pleased, that they asked me to send them sketches with a lot of actions and great sensational thrills. I do not do this work. Had Mr. Collier any right to send such a letter and by so doing encourage a new independent manufacturer to demoralize the industry with such pictures? According to your letter, you seem to approve him.

When I objected and when Collier found that my remarks WERE FOUNDED he offered to Chalmers, the excuse that he had to accept because all the copies were printed and consequently, it would have been a great loss to the manufacturers. This excuse was good many months ago but for at least 3 months, the manufacturers know that they have to show their first copy or run the chances of losing all their copies, if the film is rejected. *is rejected. back on* The excuse was not valid in this case. In fact I had notified Mr. Collier of the danger of these films before the first copy was made, and when the first copy was shown, I notified him at once. I know on another hand that the manufacturers fearing the board of Censorship, made all their copies on the quiet and supplied their customers before they called on Collier.

I have done what the manufacturers do not. I visit daily 2 and 3 shows. I remain as long as I can. I change of seats. Not for the love of moving pictures as I am tired of them, but to study the audiences.

The business is not as good as could be and will go down because the manufacturers do not see or hear the public. The public does not care about your fights on patents rights, licensees, etc. all what they want is good and clean work.

The Biograph is doing some fine work, they are now the American leaders but in their great ambition, they forget themselves and bring out some unnatural scenes, as:---the killing of a sweet child in a bar room fight----the unnatural parents not able to recognize their own son after a mere absence of 5 years---absurd----

The other day you came out with some good work in a sense but spoiled it with a blunder. Your managers and your producers dwelt entirely on this question of the tramp. You spent a lot of money in scenery, in costumes, in actors, etc and for what? To hear a woman in the audience at Keith's say: "What a foolish Judge----stupid---fake---" Did you look at the film? As you are an attorney at law, you should know that a Judge

[ENCLOSURE]

must have have some common sense. When the judge returns and cannot pay his fare, why does he allow himself to be arrested and taken to the station house? As in front of his residence we see standing two officers, officers on their beat, they must know of the judge and of his residence and if the Judge was to remove his wig in ~~the~~ presence, he would spare himself the disgrace of being dragged to the station house. As to the cabman it is still worse. The cabman is not a passing cab, it has been ordered by the Judge as it is standing in front of the residence. When the Judge, disguised as a tramp, enters the cab, the cabman knows well that it is not a tramp but the Judge himself and the cabman shows so plainly this belief that when he deposits the Judge at the house of the ball, he drives away without asking ~~asking~~ his fare. Why should he ask for the fare, he knows that the Judge is good for it. Why then show the cabman so excited at the house and order the arrest of the Judge?

Is it not sad that after spending so much money on a film, for special scenery, special costumes, etc. to hear some persons in the audience, say that it is stupid? This is why I advised a competent Board of Censorship. If when Collier examined this picture, he had used any judgement, he would have pointed this blunder and by correcting one scene and suppressing the scene of the station house, you would have saved your production.

The only excuse I can see in this picture is that you did not wish to give the lie to a certain English trade paper by showing in your film not a worthless lawyer but a worthless Judge. This paper said in April or May that the members of the M. P. P. Co. were a bunch of worthless lawyers. (I cannot swear to the true words but in the articles were the words, M.P.P.Co. Mr. Macdonald, lawyers, bunch, worthless, etc. you better try to read the articles to judge by yourself.)

I claim that our audiences are not so highly educated as to fully understand Louis XVI, the Duke of Guise, etc. Yet our spectators have enough common sense to discover these blunders.

The licensed manufacturers rely on the fact that they have all what they can do. It is true. Many exhibitors stick to the licensed manufacturers because the independents cannot promise a regular out put of 18 reels per week. Is this going to last? The licensed manufacturers should not sleep on their laurels, as a number of new companies are working very hard, not working the cheap stuff of the Centaur, Film Import Kollo, etc but are working on some very good pictures that will soon leave a number of the licensed manufacturers in the shade. I do not keep my eyes in my pockets. I see a good deal and I can say that by next fall the independents will be in shape to offer a larger output of better work than the licensed manufacturers unless the licensed ones work hard to meet this coming competition. GOOD WORK WILL WIN.

Although I am greatly pleased to know that I can go and enjoy myself in the country, that the M.P.P.Co does not need my services and ~~and~~ perfectly satisfied with the existing conditions, I am sorry to see the Licensed manufacturers going so joyfully to their ruin. My heart was with them but as they do not need me, I retire.

Jno. M. Bradlet,

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M.P. - Censorship

730  
June 28, 1909.

Mr. John M. Bradlet,  
159 West 36th Street,  
New York, N.Y.

Dear Sir:-

Yours of the 21st inst. with enclosed manuscript, and also yours of the 25th inst., have been duly received. While many of the points which you make have some weight, I believe that the Licensed Manufacturers generally are satisfied with the constitution and work of the present Censorship Board and the limits of criticism which that Board has marked out for itself. The work has been carried on for so short a time that it would be very unfair now to attempt to either criticise them or propose changes in their methods, for it is not at all clear that their standard of criticism in regard to the morality of moving pictures will not be accepted pretty generally by the public. You may be aware that some countries, such as England, for instance, have attempted to establish a dramatic censorship, and in such countries this censorship is never exercised without calling forth a storm of criticism and it appears to me that this criticism is inevitable, since

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Mr. John M. Bradlet. June 28, 1909.

no two persons will ever agree as to the proper standard of morality which should guide such censors.

I return herewith the manuscript which you sent me.

Your proposition to act as a critic for the films produced by this Company is one which I am not disposed at the present time to consider.

Yours very truly,

GFS/ARK.

Vice-President.

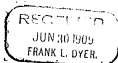
*Geo. M. Bradlet*

39 W. 36th St. N. Y.

*M. P. - Censorship*

New York, June 29th, 1909.

730  
*Given*  
Mr. Frank L. Dyer,  
Orange, N. J.



Dear Sir:-

Your letter is a great relief to me. I am not selfish, I merely wanted to help the Industry. I wasted much of my time and of my money, with no remuneration.

As long as the Licensed Manufacturers are satisfied with the present state of affairs, I retire from the field, with the greatest pleasure and wish them good luck. I have done my best and I sincerely hope that in the near future, the manufacturers will not regret of having paid so little attention to my warnings. As I say, your letter is a great relief, as on Saturday I will be able to do, what I feared I would not be able to do, to go to the country for a long vacation with nothing on my mind to worry myself.

I remain Dear Sir,

Very respectfully,

*Geo. M. Bradlet.*

P. S. I add a few closing notes.

*The danger of a trade paper is to not tell the truth -  
When your producers will read the notice given to your picture  
"A Lost Civilization" page 870 M. P. World of June 26th they  
will be so pleased that next time they will still show a  
more stupid judge -*

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THE BOARD OF CENSORSHIP  
OF PROGRAMS OF MOTION PICTURE SHOWS  
96 FIFTH AVENUE, COR. 15th, ST.,  
New York City.

July 2nd, 1909.

Motion Picture Patents Company,  
80 Fifth Avenue,  
New York City.

Gentlemen:-

The following pictures see at your office to-day are  
approved by the Board of Censorship in toto:

Prince and the Pauper.	Edison.
A Coward.	"
Taking His Photograph.	"
Love's Sacrifice.	"
Mother Goose.	"
Room Mates.	Lubin.
A Great Wrong Righted.	"
A Soldier of the U. S. Army.	Kalem.
The Wizards Walking Stick.	Eclipse.
The Pleasant Prince.	Selig.
The Coin Collector.	Gaumont.
Raised in the Country.	"
Visions of Mother.	"
A Bad Case.	"
The Renunciation.	Biograph.
Jealousy and the Maid.	"
Sweet and Twenty.	"
Mrs. Jones' Lover, or	"
I want my hat.	"
No Rest for the Weary.	Pathe.
Calinofait du Sport.	"
Life Saving.	"
Miss Maggie.	"
Concert de Theodore.	"
Incendiaire	"
Divertissement Chinois.	"
Film with no Title	"
Skating Tournament.	Vitagraph.
The Cobbler and the Caliph.	"
The Birth and Adventures of	"
A Mountain Pen.	"
The Magic Pen.	"

The following pictures the Board would like to view again:

Comedieu derriere la Foile  
Four Legged Pickpocket.

Pathe.  
"

(2)

Rat D'hotel.  
Conchita the Spanish Belle.

Pathe.  
Eclipse.

In the following pictures we would ask that the portion where the burglar in searching for clothes in a wardrobe, holds up to view a pair of woman's drawers, be eliminated. Also a portion later on in the picture he lifts his skirts and shows the drawers. Both these cuts together would probably amount to only a few feet of film.

The Sideboard Folding Bed.

Lubin.

The following Pathe film the Board asks that the kiss at the end of the picture be eliminated. To an American audience this kiss would make all that had gone before too suggestive. Merely cut off the last few feet.

Aime part Sa Bonne.

Pathe.

The Board now approves the following film from which we had asked to have some portions eliminated.

Caught in His Own Trap.

Very truly yours,

JOHN COLLIER,

Per Walter Storey,

REPORT OF THE BOARD OF CENSORSHIP  
ON FILM SHOWN JULY 12th, 1909.

Motion Picture Patents Company,  
80 Fifth Ave.,  
City.

*W. D. L.*

Gentlemen:-

The following pictures seen at your office today are approved  
by the Board of Censorship:-

A Strange Meeting	Biograph
The Romance of a Stranded Actress	Essanay
The Sentinel on Duty	Gaumont
The Morning After	"
A Long Reach	"
The Hidden Treasure	Eclipse
Pleasing the Baby	"
A Pot of Gold	Lubin
Four Legged Pickpocket	Pathe
Comedienne derrier la Boile	"
Across the Island of Ceylon	"
A School of New Guinea	"
La Victime	"
The Trappers	"
The Prodigal Son	"

In the Gaumont film "Laurels" it is the opinion of the Board that the introduction of the scene depicting Christ being crowned along with the scenes of the dancing girls, would raise a great deal of adverse opinion from most classes of people, reacting not only on the Board, but also on the manufacturers. We therefore ask that this scene be eliminated

The Pathe film "Rat d'hotel," which the Committee has carefully inspected three times, is condemned entirely. The film hinges on the successful perpetration of the crime of burglary accomplished by chloroforming the victim. The apparent ease in committing this crime adds to its dangerous suggestiveness of similar acts on the part of any onlooker. The Board feels that this picture would incite to crime and therefore cannot approve it.

Very truly yours,

JOHN COLLIER,

Gen'l Secretary.

NATIONAL BOARD OF CENSORSHIP

96 Fifth Avenue,  
New York City.

July 24th, 1909

The Motion Picture Patents Co.,  
80 Fifth Avenue, City.

Gentlemen:-

The following pictures seen at your office to-day are passed  
by the Board of Censorship:-

Mr. Buttinski	Lubig
Sporting Blood	"
Before the Last	Selig
Stripping the Forest	Eclipse
The Truant	Vitagraph
Bugle Call	"
The Squire's Will	"
The Better Way	Biograph
His Wife's Visitor	"
A Child of the Forest	Edison
The Last Confession	Gaumont
Out of Work	Kalem
Traced by a Kodak	"
'Tis Now the Very Witching Hour of Night	Edison
My Lord in Livery	"
Ethel's Luncheon	"
McAdventures d'un Pantaloon	Pathe
La Lettre au bon Dieu	"
Duolfardie et Ses de Gas	"
How Jack Helped his Little Sister	"
How Balloons are Made	"
Le dot d'Hermine	"
Elevage de Taureaux	"
Manga Ta Soupe	"
Faux Heritier	"
Le Revanche de Bob	"
Les coulisses de Guignol	"
La Barba de Theodore	"
Le Jouer	"
Le Pelicier	"
La Cultureen Hongrie	"

The Pathe Film "Une Nuit Parisienne," the Board cannot pass. There is no dramatic interest in the picture whatever, it being only a representation of men and women getting drunk on champagne. This film impressed the Board, as Pathe films always do, as a faithful and realistic picture of one of the many ideas of life but to an American audience the sight of women getting drunk is disgusting. The publication of this film we believe would work great harm to the reputation of the Moving Picture business.

After the second inspection the Board passes the Pathe Film, "Le Jouer," subject to the following changes:- By elimination and appropriate sub-titles change the scene of the attempted suicide by inhaling gas into one of fainting from starvation.

Suicide is always dangerous in its suggestiveness to people of weak minds and especially so when the method employed is as easy to imitate as in this case. The Urban Eclipse Film, "The Burning Point," we would like to have re-submitted. Very truly yours, JOHN COLLIER,

Gen. Sec'y.

[JULY 1909]

THE BOARD OF CENSORSHIP  
OF PROGRAMS OF MOTION PICTURE SHOWS

96 Fifth Avenue, Cor. 15th St.,  
New York City.

The Motion Picture Patents Co.,  
80 Fifth Ave.,  
City.

Gentlemen:-

The Committee on Censoring of the Board of Censorship desires to submit for consideration to the film manufacturers, the following opinions bearing on the attitude of the Board toward criminal acts depicted in Moving Pictures.

Criminal acts which are too violent or gruesome, or which are in no way essential to the working out of the story, are to be deprecated. Scenes which directly suggest the committing of crimes, e.g.; the manner of picking a lock or of holding up a person on a highway, are equally objectionable; finally, the Board desires to express disapproval of scenes which represent the mixing of potions of poisons for the purpose of committing murder.

Very truly yours,

(Signed) John Collier,

General Secretary.

(73d/10)  
?



New York Sept. 3rd 09

Motion Picture Patents Co.,  
80 Fifth Ave.,  
City.

Gentlemen:-

The following pictures seen to-day in your offices are passed by the Board of Censorship:

A FISH STORY	LUBIN
ALL ON ACCOUNT OF A LETTER	LUBIN
WHEN WOMAN HATES	LUBIN
A VISIT TO UCCLE	LUBIN
A FAIR EXCHANGE	BIOGRAPH
THE UNSPOKEN GOOD-BYE	VITAGRAPH
THE SIREN'S NECKLACE	VITAGRAPH
THE MARBLE HEART	VITAGRAPH
THE FIRST AIRSHIP CROSSING THE ENGLISH CHANNEL	GAUMONT
THE MASON'S PARADISE	GAUMONT
THE TRICKY DUMMIES	GAUMONT
THE FIDDLE AND THE PAN	GAUMONT
HER BUSY DAY	GAUMONT
THE ENGAGEMENT RING	SELIG
THE ORDEAL	EDISON
THE FATAL LOVE	URBAN-ECLIPSE
PONTINE MARSHES ITALY	URBAN-ECLIPSE
STOLEN GEMS	GAUMONT
GLIMPSES OF PARIS	GAUMONT

the Edison Film, "THE ORDEAL," is one that the Board took great pleasure in passing. It was not only interesting from the exhibitor's view point, but impressed the Board as an artistic and distinguished production. As an example of American skill in Moving Picture manufacture, it will no doubt stand high.

Very truly yours,

General Secretary.

*W. L. L.*

# THE PEOPLE'S INSTITUTE

318 EAST FIFTEENTH STREET  
NEW YORK

Message received at the  
opening of the Institute's  
Twelfth Season, Novem-  
ber 8th, 1909:

"I send to The People's In-  
stitute my cordial greetings and  
my best wishes for a successful  
year. I am deeply interested  
in the work of the Institute and  
I hope the range of its bene-  
ficial influence will constantly  
increase."

CHARLES E. HUGHES.

LEMAN ABBOTT  
FRANK L. BARNETT  
ALFRED J. BOUTON  
E. R. BOWEN  
EDWIN M. BULLERY  
NICHOLAS NEWAY BUTLER  
ALBERT CARROLL  
JOHN S. CROSBY  
SAMUEL H. DOWNEY  
JOHN H. FOLEY  
ROBERT W. DE FOUST  
FRANKLIN H. GERRING  
J. W. GILES  
SAMUEL GUTMAN  
THOMAS C. HALL

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Sept. 15, 1909.

Mr. Frank W. Dyer,  
President, The Motion Picture Patents Co.,  
City.

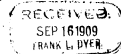
Dear Mr. Dyer:

I learn that you have returned to the City, and am anxious to have a talk with you as soon as it is convenient. Such steady progress has been made by the censorship during the summer: the situation, local and national, which the censorship was designed to meet, has altered and on the whole favorably: and there are plans for the immediate future which will interest you and which I am anxious to lay before you. I can call at practically any time you may suggest.

Very truly yours,

*John Allen*

General Secretary,  
Board of Censorship.



[FROM WALTER STOREY]

New York, Sept. 17th, 1909.

The Motion Picture Patents Co.,  
80 Fifth Ave., City.

Gentlemen:-

The following pictures seen at your office to-day are  
passed by the Board of Censorship:-

The Judges Ward	Lubin
The Hand Organ Man	Kalem
The Scales of Justice	Vitagraph
Stricken Blind	Selig
Wife or Child	Eclipse
Breach of Promise	"
Their Social Education	Edison
The Farmer's Treasure	Eclipse
Aeroplane at Reims	"
A Duel in Mid Air	Edison
The Lie; A Story of the Franco Prussian War	Edison.
The Drunkard's Fate	Selig
The Brothers	Essanay
Stag Hunting in Japan	Pathe
An Algerian Stud	Pathe
In Ancient Greece	Pathe
The Marvellous Garland	Pathe
Woman's Life in India	Pathe
A Hiccup Mine	Pathe
Druidic Remains in Brittany	Pathe
A Tempestuous Adventure	Pathe
Acrobatic Exercises by the Colibri	Pathe
Dwarfs	Pathe
The Painter's Sweetheart	Pathe
The Grand Review before the Duke of Baden	Pathe

While the Board passed the Kalem picture, "The Hand Organ Man," it is regretted that a subject such as kidnapping was used. Public feeling against this kind of crime is still strong in various parts of the country and it does not seem to the Board to be a good policy to publish a picture, however well it is handled, having for a subject a theme that is so open to criticism.

The use of satire as material for comedy exemplified in the Edison film, "Their Social Education," is a new note in Moving Pictures and seems to the Board well worth following up. "The Lie," also by Edison impressed the Board as one of that Company's finest productions.

Very truly yours,

Censorship Secretary.

*Walter*

October 15th, 1909.

Motion Picture Patents Co.,  
20 Fifth Ave.,  
City.

*M. J. [unclear]*

Gentlemen:-

The following pictures shown at your office are  
passed by the Board of Censorship:-

BRITAIN AND BOER	SELIG
THE SENORITA	SELIG
COUNTRY LIFE IN A FLAT	GAUMONT
TICKLED TO DEATH	GAUMONT
CROWN PRINCE OF GERMANY DRILLING TROOPS	ECLIPSE
CASTING BREAD UPON THE WATERS	ECLIPSE
HIS HELPMATE	GAUMONT
HUSBAND'S STRATEGY	GAUMONT
ADELE'S WASH DAY	VITAGRAPH
ANNETTE KELLAMAN	VITAGRAPH
ENTOMBED ALIVE	VITAGRAPH
BILL THE BILL POSTER	EDISON
A WINTERS TALE	EDISON
THE IMP OF THE BOTTLE	EDISON
BRAVE WOMEN OF '76	LUBIN
HIS MASTERPIECE	EDISON
A LESSON IN PALHISTRY	LUBIN

In the Edison Film, "A ROSE OF THE TENDERLOIN," the Board would ask that the scene showing the suicider of the woman be shortened. The scene as it was presented emphasizes the act too much making it unnecessarily gruesome.

Very truly yours,

Censorship Secretary.

*Huber*

**National Board of Censorship**  
**OF MOTION PICTURES**  
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 NEW YORK CITY, N. Y.

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 Phone 3843 Chelsea

Oct. 25th, 1909

Mr. Frank Dyer, Pres.

Motion Picture Patents Co.

80 Fifth Ave., City.

Dear Mr. Dyer:-

After our conversation in Orange, some weeks ago, I went ahead and began negotiations with the Board of Education with a view to pushing rapidly ahead the use of motion pictures in schools. We have now gotten several important concessions from the Board of Education. Dr. Maxwell authorizes us to make a thorough demonstration of moving pictures in the evening recreation centers, and assured us that if the experiment makes evident the value of moving pictures, they will be adopted throughout the recreation systems of the public schools. Possibly, a more important opening is the following: We asked the Board of Education for an opportunity to make a demonstration before its members, officially, in the official room of the Board of Education. To this demonstration, the school authorities of the surrounding Cities would be invited, the object being to make clear the pedagogical and scientific



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(2)

value of moving pictures, and likewise to explain the business side of the proposal to introduce moving pictures into the regular school curriculum. To-day, I have a letter from Supt. Maxwell saying the permission has been granted and that it is only necessary for us to fix the date. We have likewise increased the official representation of the schools on the Censorship Board, and Dr. Maxwell himself has agreed to become a member of the Censoring Committee. In order to make possible the attendance on Censorship meetings of the men "higher up" in the education system, we begin this week to hold one censorship meeting in the evening (Thursday evening, this taking the place of the regular Friday session.)

I spoke to Mr. Karvin on all these points, and he suggested that I submit all the propositions to the Patents Co. in writing. This I did, and I suppose they are now being considered by the members of the Patents Co. We are anxious to strike while "the iron is hot." There are a number of other important developments in the line of the adoption of moving pictures by educational and philan-



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(3)

thropic bodies, but I will not take space to write it in here. It would probably be best if I could see you and have a clear half hour to talk the matter over, or could go before a meeting of the constituent members of the Patents Co. As I said before, it is a broad question of policy on the part of the manufacturers, involving an answer to the question whether they thoroughly desire the adoption of moving pictures by the public school systems of the country.

You will be interested to know, ~~that~~ in connection with the Censorship proper, that the National Censorship among independent manufacturers is now virtually complete. This has come about through the shifting of most of the European agencies from the International Co. to the Film Import Co. We have been for some time censoring nationally for the Film Import Co., but continue to censor only locally for the International Co. Unless some important change comes in the drift of the moving picture business, the Censorship will be complete for all manufacturers in a few weeks.

very truly yours, *John Cohen*

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October 27, 1909.

Mr. Frank W. Dyer,  
The Edison Mfg. Co.  
73 Lakeside Ave.  
Orange, N. J.

Dear Sir:—

Through Mr. Marvin and the representatives of the various licensed companies, I have arranged for an evening session of the Board of Censorship, on Thursday evening of each week at the Patents Co. office. This was done in order to afford an opportunity for various members of the Board of Education to be present, as it was not deemed advisable nor was it very practicable for them to give up any of their official working hours during the day.

As Dr. Maxwell, head of the School System of this City will be present together with Mr. J. C. Astredo, Chairman of the San Francisco Board of Censorship and Mr. J. M. Casey, head of the License Bureau of Boston, we would be very glad if you could find it convenient to be present and meet these gentlemen:

RECEIVED  
OCT 28 1909  
FRANK L. DYER.

Very truly yours,

John Collins

General Secretary.

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Orange, N.J., October 28, 1909.

Mr. John Collier,  
National Board of Censorship,  
96 Fifth Ave., N.Y.C.

Dear Sir:-

Mr. Dyer has received yours of the 26th inst. and after giving the matter careful consideration, directs me to say that in his opinion the Licensed Manufacturers would probably be unwilling to advise the use of motion pictures in the recreation centers of the City, since he believes that this would simply amount to the giving of free shows to the detriment of the regularly established moving picture theatres. Mr. Dyer sees no objection however, to the use of pictures in the public schools as part of the regular curriculum, in which case, of course, only pictures of an educational nature would be used.

You understand that these opinions are purely personal with Mr. Dyer and that he has not approached any of the other Manufacturers in regard to it, but he feels that his opinion will be shared by the others.

Yours very truly,

GFB/ARK.

Secretary.

M. P. - Censorship

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WALTER STORREY, *Censorship Secretary*  
Phone, 3841 Chelsea

November 1, 1909.

Mr. Frank W. Dyer,  
Edison Mfg. Co.,  
73 Lakeside Ave.,  
Orange, N. J.

Dear Sir:—

Answering your recent letter in regards to the use of moving pictures in recreation centers.

We understand the position you take in this matter and agree with you. However, as the enclosed copy of our letter to Mr. Kleins will explain, we are going ahead with the idea of having pictures introduced directly in the school programs. You will note that our work toward the introduction of moving pictures as a means of education will not be confined to simply the New York authorities. We intend to have a demonstration in the rooms of the Board of Education to which will be invited leading educators from the surrounding cities and we also intend to send this selected group of films to other cities under our auspices.

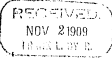
Very truly yours,

*John Collier*

General Secretary.

EGH.

*Yours*



[ENCLOSURE]

November 1st, 1909.

Mr. George Kleins,  
52 State Street,  
Chicago, Ill.

Dear Sir:-

After considerable work on our part we have at last secured the interest in moving pictures of Dr. William H. Maxwell, Supt. of public schools in this City. We have arranged with him to give a demonstration program before the Board of Education as soon as we can secure the proper films. The pictures which we wish to gather together for this demonstration will also be used in a number of other exhibitions in this City before other bodies of influential persons interested in educational work. Later we plan to send the films to other cities such as Philadelphia and Boston.

In carrying out this plan it is necessary to have from ten to a dozen of the Urban films dealing with scientific biological and industrial subjects.

We have an offer from the firm of Raleigh & Roberts to send us a number of samples of such educational films and we sincerely hope that it will be possible to show some of Mr. Urbans work at about the same time.

If you still intend to carry out your plan spoken of last Spring of having some sample educational films sent to this country for demonstration purposes, would it be possible for us to have an exhibition of them in about six weeks or so?

You will very readily see that we have at last secured an exceptional opportunity for the opening up of an additional market for moving pictures aside from the fact of the greater dignity that this business will acquire from be-

[ENCLOSURE]

--2--

Mr. George Kleine.

ing associated with educational work of the country.

Very truly yours,

General Secretary.

E.G.H.

721  
M.P. — Censorship

November 3, 1909.

Mr. Dyer:-

Manufacturers' Meeting: You may wish to raise some question as to whether the Manufacturers approve of the Censorship Board's attempt to force the use of moving pictures in schools and recreation centres.

G. F. S.

GFS/ARK.

851  
November 6th, 1909.

*Mr. Rogers*  
Motion Picture Patents Co.,  
80 Fifth Ave.,  
New York City.

*Revised*  
NOV 11 1909

Gentlemen:-

The following pictures seen at your office yesterday, Nov. 4th, are passed by the National Board of Censorship:

Rymsters Ruse	Gaumont
Harloquin's Nightmare	Gaumont
Fighting Suffragettes	Eclipse
From Workhouse to Mansion	Urban
A Mislaid Baby	Essanay
School Celebration in Newark	Edison
What the Cards Foretold	Edison
The Keeper of the Light	Edison
La Dame au Camillias	Pathe
Carmen	Pathe
Jim Blackwood Hockey	Pathe
Jean Val Jean, the End of a Long Life	Pathe

The following pictures are passed subject to alteration:

Tragedy de Belgravia	Pathe
Children of the Sea	Lubin
When Women Win	Lubin
Personal Conduct of Henry	Essanay

The following pictures to be reconsidered:

Tragic Idyl	Pathe
-------------	-------

The following picture is condemned:

"Smuggler's Game"	Selig
-------------------	-------

The Edison Film, "The Keeper of the Light" impressed the Board as one of the most dignified productions of that Company. The sea scenes were especially fine in their dramatic feeling and interest.

The Camillias and Carmen films of Pathe are worthy of all praise. The actress taking the part of Camille was exceptionally good. The Pathe film "Tragedy de Belgravia" is a most dramatic production. The Board would ask that the part of the scene where the officer shoots into the prostrate body of the queen be shortened. Simply reduce the number of shots. The other Pathe film "Tragic Idyl" needs clearer sub-titles to make it evident that the man has simply rejected the woman's love, as now one is rather confused as to the actual drift of the story or else a very morbid motive is inferred for her suicide.

In the Lubin film, "Children of the Sea" the Board asks that the following sub-titles be inserted after the scene representing the appearance of the vision and the consequent repulse of the suitor. The widow, true to her husband's memory, refuses to marry and flees heart-broken away.

(2)

We think that you will agree with us that this sub-title will more clearly explain your meaning of the succeeding scenes which as we understand are intended to portray the idea that the woman, while deeply in love with the soldier is still faithful to her husband's memory and the agony of mind in which this circumstance places her, compels her to flee from the presence of her suitor, forcing her to end her life. The other Lubin picture "When Women Win", the Board would ask that the following changes be made. Cut out the latter part of the courtroom scene from the point just before every one is ordered from the room with the exception of the two prisoners. This would eliminate the very undesirable suggestiveness of the remainder of the scene - that of the conduct of the judge with the prisoners. Cut out either the entire scene relating to the doctor or else all that portion from the scene representing the doctor arriving at the door. The part that follows, suggesting that the man has given birth to a child is utterly disgusting. By transporting the courtroom scene so that it becomes the last scene, you will have an interesting ending to the film.

The Selig Film "Smuggler's Game" is condemned entirely in its present form. As has been shown by previous decisions of the Board this body has no objection to the proper use of crime in a moving picture. The point against this picture is that there is no big motive back of it in the incidents and acting to redeem the murders, drugging, and general brutality of some of the scenes? This picture is based solely on the exploits of a criminal, the love story in it occupying a very insignificant part. As a dramatic production it lacks quality, and if for another reason, we believe it would be extremely unwise for the manufacturers to put this picture out. It would simply mean the lowering of the standard set by previous productions. That picture of this sort are demanded by the trade is probably very true, but the same effect of action could no doubt be secured in a more dramatic and less melodramatic manner.

The Board is loathe to condemn this picture, believing that the manufacturers are sincerely trying to produce objectionable pictures and therefore the Board would be very glad to consider any suggested alterations in this film which would eliminate the undesirable features that it now possesses.

The Essanay Film "Personal Conduct of Henry" while a clever comedy would no doubt be improved by the elimination of the very obvious and unnecessary display of ~~lingerie~~ certain lingerie upon the clothes-line in the back yard scene. Cut out that part of the scene up to the point just before the last garment is withdrawn from the line. In doing this you will eliminate a slightly vulgar suggestion from an otherwise very laughable comedy.

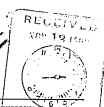
Very truly yours,

Censorship Secretary.

Mr. Ryan  
733

# National Board of Censorship OF MOTION PICTURES. ESTABLISHED BY THE PEOPLE'S INSTITUTE 96 FIFTH AVENUE, Cor. 15th Street NEW YORK CITY, N. Y.

Free



ADVISORY COMMITTEE	GOVERNING BOARD	COMMITTEE ON CENSORING
LYMAN ABRAHAM FELIX ADLER CHARLES F. ARND ALFRED J. BOLDWIN JAMES P. BOYLE WILLIAM ADAMS BROWN ROBERT W. BARNES JOSEPH R. BUCHANAN S. PARKES CHAMBER ANDREW CANNESSE JOHN BATES CLARK R. FULTON COTTRELL EDWARD T. DEWESE SAMUEL B. DORCHELLY ANDREW W. EDWARDS ROBERT W. DE FOREST FARVELLIN H. GIBBONS RICHARD WATSON GILDER SAMUEL GORTNER ELMER E. L. GOSSEL PERCY S. GRANT DAVID H. GERSH THOMAS C. HALL HAMILTON HOLY WILLIAM M. TOWN GEORGE W. KIRCHWY V. LOBERT MACE HOWARD MARSHFIELD MARCUS M. MAXES WILLIAM H. MAXWELL ROBERT E. MACLEATH GEORGE McLEATH H. THOMAS MERRIS H. HERMAN NEWSON FRANK MASON NORTH LEONORA O'BRIEN EDWARD D. PARK JOHN P. PETERS JAMES H. RUTHERFORD WILLIAM R. RICHARDS JACOB A. RIFE FRANKLIN H. SARGENT JACOB H. SCHIFF SAMUEL SCULLMAN EDWIN R. A. SULLIVAN ALBERT SHAW JACOB SILVERMAN MARY E. SHAWDOVER THOMAS R. SEIGER GEORGE J. SMITH EDWARD L. STUBBS ARSON PHILIPS STUBBS OSCAR S. STRAIN ROBERT WATSON EDMUND L. WINTERMAN, JR. STEPHEN S. WINE	Rev. Dr. Geo. WILLIAM KNOX, Chairman <i>Charity Organization Society</i> —W. FRANK PERDUE <i>Children's Aid Society</i> —C. A. PARDON <i>City Vigilance League</i> —MATTHEW BATTIE <i>Ethical-Social League</i> —GEORGE WILLIAM KNOX <i>Federation of Churches</i> —WALTER LADLAW <i>League for Political Education</i> —ROBERT E. ELY <i>Neighborhood Workers' Association</i> —HOWARD BRANSTREIT <i>Public Education Association</i> —MRS. MILDRED BUTTS TROSE <i>Society for the Prevention of Crime</i> —T. L. MCCLINTOCK <i>Women's Municipal League</i> —MISS M. SHEREN TOWNSEND  <i>Members at Large:</i> JOHN COLLIER MRS. JUDITH REEDING ALBERT SHILES CHARLES RYLAND SMITH GEORGE STANLEY WHEELER MISS EVANGELINE E. WHITNEY	ALBERT SHILES, Chairman MICHAEL M. DAVIS, JR. JOSEPH P. GILGIES HILTON GIBBONS Wm. M. McCLINTOCK WILLIAM H. MAXWELL MRS. AUGUSTA PARKSOTT G. A. FROSTEN MRS. JOSEPHINE REEDING  EXECUTIVE COMMITTEE MICHAEL M. DAVIS, JR., Chairman HOWARD BRANSTREIT RALPH FOOTE THOMAS L. MCCLINTOCK MRS. AUGUSTA PARKSOTT MRS. JOSEPHINE REEDING ALBERT SHILES  OFFICERS JOHN COLLIER, General Secretary FREDERICK M. COOPER, JR., Executive Secretary WALTER STONEY, Generalship Secretary Phone, 2843 Clevela

Edison Mfg. Co.,  
73 Lakeside Ave.,  
Orange, N. J.  
November 11, 1909.

Dear Sirs:-

The Board wishes to bring to the attention of the manufacturers the advisability of having some mark placed upon all films passed by this Board, in order to insure the more ready acceptance of such films in cities where there is more or less local supervision.

When the Censorship was first instituted some films were made up with a mark showing the approval of the Censorship Board. This was to be attached as a leader to each picture, but the use of it was discontinued as there seemed to be no protection against an irresponsible person from detaching this film and reattaching it to any particular picture that he wished, thereby bringing great discredit upon the judgement of the Board. In view of the fact that at the present time it seems desirable to have some mark upon the pictures passed, the following plan is proposed for the consideration of the manufacturers.

A gummed label of very thin, tough paper to be printed, stating the fact that the film had been passed by the Board of Censorship, and, if desired, containing the name of the manufacturer. This would be attached to the film on the first title picture and then perforated with either some device such as a star or the initials of the manufacturer or importers name.. The label being on very thin paper would not interfere with the free running of the film through the projecting machine.

By the device of having this label attached to the film containing the title, and in addition being cancelled by the perforations, it would be impossible to use the

--2--

label on any other film. Of course the use of the label would be optional with the manufacturer. What we wish to know is if there is any objection to authorizing the use of such labels for those who care to use them.

Very truly yours,

NATIONAL BOARD OF CENSORSHIP.

BY Walter Storey  
Censorship Secretary.

WS/EGH

145  
M. P. - Censorship  
RECORDED  
NOV 12 1909  
G. I. A. A.  
AMERICAN MUTOSCOPE AND BIOGRAPH COMPANY  
11 E. FOURTEENTH ST., NEW YORK, N. Y.

November 12, 1909.

copy.

Sir:

On the 8th instant, I received your letter of the 6th instant, and regret that this is my first opportunity to reply.

I objected to the letter that the Board of Censorship wrote to the Laemmle Company, as a manufacturer, and not as an officer of the Motion Picture Patents Company.

It appears to me that the Motion Picture Patents Company is not in any way interested in my action in not submitting the films of the Biograph Company to the Board of Censors, except in so far as my action interferes with its desire to encourage the censoring of films and the improvement of subjects to the greatest extent.

As you do not appear to be able to say what the course of the Board will be in the future, further discussion seems to be unnecessary. In the meantime, films of the Biograph Company will not be submitted to the Board to be censored, and the users of our films will receive due notice of the fact.

Respectfully,

*J. J. Keene*  
President.

MR. JOHN COLLIER, General Secretary,  
National Board of Censorship,  
96 FIFTH AVENUE, NEW YORK CITY.

M.P. - Censorship

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Nov. 13, 1909.

THIS LETTER BEING SENT TO ALL LICENSED MANUFACTURERS.

Mr. J. J. Kennedy,  
c/o Biograph Company,  
11 East 14th Street,  
New York, N.Y.

Dear Mr. Kennedy:-

Mr. Charles Sprague Smith, the Director of the Peoples' Institute, which is responsible for the Censorship Committee, has requested an interview in reference to the present and future relations between the Licensed Manufacturers and the Censorship Committee. Mr. Smith will be at the Patents Company's office on Tuesday, November 16th, at 4 o'clock, and I believe it advisable that as many of the Licensed Manufacturers as is possible be there to discuss the situation with him. I also think it advisable to have a meeting of as many of the Manufacturers as possible shortly after 3 o'clock on that day to discuss the situation before we meet Mr. Smith. If you cannot be present or send a representative, I would suggest that you express your views in writing as to what attitude should be taken by the Manufacturers to the Censorship Committee, and whether we should cut off

#2

Mr. J. J. Kennedy.

all relations with this Committee or merely have them confined  
their activities to either passing or rejecting certain pictures without comment.

Yours very truly,

Vice-President.

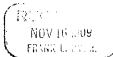
*M.P. - Censorship*

AMERICAN MUTOSCOPE AND BIOGRAPH COMPANY  
11 E. FOURTEENTH ST. NEW YORK, N.Y.

545

November 15, 1909,

FRANK L. DYER, ESQ., Vice President,  
Edison Manufacturing Company,  
ORANGE, N. J.



Dear Mr. Dyer:

Your letter of the 13th instant, relative to the licensed manufacturers meeting Mr. Smith of the Peoples' Institute tomorrow afternoon, has been received and has had careful consideration.

It is our opinion that the censoring of film subjects is very desirable and very probably necessary under existing conditions.

It is also our opinion that a number of those who have taken leading parts in the censoring of film in connection with the Peoples' Institute, have not fully realized the importance and seriousness of the duties that they undertook to perform.

The producing and marketing of film is an industry of too great importance, both commercially and in its relation to the public welfare, to be subject to those who, after being afforded every facility to accomplish the good work that they set out to do, now assume an attitude of controlling or dominating the business.

Under existing conditions, we do not think it

FRANK L. DYER, ESQ.

-2-

advisable to be represented at the manufacturers' meeting tomorrow or to meet Mr. Smith.

It is not within our province to tell the Board of Censorship how to censor films, as censoring is its work, and we will not submit any of our films to be censored unless the activities of the censors are confined within proper limits.

Respectfully,

BIOGRAPH COMPANY,

*J. H. Reed*  
President.

5  
4

773

Nov. 17, 1909.

Charles Sprague Smith, Esq.,  
318 East 15th Street,  
New York, N.Y.

My dear Sir:-

Confirming the understanding arrived at in the conference held yesterday between several of the Manufacturers of Licensed Motion Pictures, and yourself, and speaking for all of the Licensed Manufacturers operating under a license from the Motion Picture Patents Company, except the Biograph Company, these Manufacturers will undoubtedly be willing to continue submitting their films to a Board of Censors acting under the supervision of the Peoples' Institute, provided the Peoples' Institute will insure that hereafter the work of the Censorship Committee shall be confined wholly to either rejecting a picture or suggesting changes in it which they believe advisable, without any comments whatever that can be used as advertising, and preferably without any comment whatever on any picture, except such as are adverse to the picture. It should also be further understood that neither this

#2

Charles Syrague Smith, Esq.

Censorship Committee nor any of its members shall give out statements or interviews or publish articles which will give the public the impression that the Censorship Committee is influencing or directing the Manufacturers in any way in regard to the kind of pictures, or method of treatment thereof, which are being made by them. The Manufacturers should also be assured that the Committee will be made up of persons, each one of whom shall take his work seriously and not consider the film inspection meetings of the Committee as a kind of entertainment provided for them at which light and frivolous remarks concerning the pictures are in order. This last, I understand, is not true of all of the present members of the Committee.

If you are willing to agree that the work of the Committee shall be confined to the lines indicated above, I will be pleased to send copies of your letter to that effect to the various Manufacturers, and I am sure that the former relations with the Censorship Committee will be resumed by the Licensed Manufacturers.

Yours very truly,

GFS/ARK.

Vice-President-EDISON MANUFACTURING CO.

*M.P. - Censorship*

THE PEOPLE'S INSTITUTE

318 EAST FIFTEENTH ST.

NEW YORK

CHARLES SPRAGUE SMITH, MANAGING DIRECTOR

TELEPHONE 2411 STUYVESANT

HOWARD MANSFIELD, CHAIRMAN BOARD OF TRUSTEES

V. EVERETT MACY, TREASURER

MICHAEL H. DAVIS, JR. SECRETARY

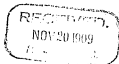
733

November 19, 1909.

Mr. Frank L. Dyer,

Vice president Edison Mfg. Company,

Orange, N. J.



My dear Mr. Dyer:-

I have sent you a formal communication in answer to your letter of Wednesday, and I want to add a personal line.

It seems to me that it will be of importance for both parties to the agreement to have occasional meetings when we can talk over matters and forestall any possible misunderstanding. Will it not be agreeable for you, or for some one in full authority, to lunch with me once a fortnight, or once a month, at the Century Club, or I can go over and lunch with you, and at such times we can talk over matters of mutual concern.

Sincerely,

*Charles Sprague Smith*

*Screen -  
See you after  
arriving*

THE PEOPLE'S INSTITUTE

318 EAST FIFTEENTH ST.  
NEW YORK

CHARLES SPRAGUE SMITH, MANAGING DIRECTOR

TELEPHONE 2411 STUYVESANT

HOWARD MANSFIELD, CHAIRMAN BOARD OF TRUSTEES  
V. EVERETT MACY, TREASURER  
MICHAEL M. DAVIS, JR., SECRETARY

MR. L. DYER

November 19, 1909.

Mr. Frank L. Dyer,

Vice President Edison Mfg. Company, Orange, N. J.

Dear Sir:-

our discussion on Tuesday covered two points, and these are brought forward again in your communication of the 17th. Upon these we reached agreement.

First, that the work of "the censorship committee shall be confined wholly to either rejecting a picture or suggesting changes in it which they believe advisable and without any comments whatever that can be used as advertising, preferably without any comments whatever on any picture except such as are adverse to the picture" To this I fully assent.

The second point touched <sup>is</sup> the question of the attitude of the censorship committee, or some of its members, which was criticised as in some instances not serious enough.

It became plain through our conversation that the chief members of the censorship group were not open to this criticism and whatever justification therefor had existed was one due rather to thoughtlessness than to any intention to regard lightly the importance of the work, or the interest of the manufacturers, and a suggestion to members of the committee, which will be given, that objection in certain quarters has been made, will suffice to obviate any basis for criticism in the future.

## THE PEOPLE'S INSTITUTE

318 EAST FIFTEENTH ST.  
NEW YORK

CHARLES SPRAGUE SMITH, MANAGING DIRECTOR

TELEPHONE 2411 STUYVESANT

HOWARD MANSFIELD, CHAIRMAN BOARD OF TRUSTEES  
V. EVERIT MACY, TREASURER  
MICHAEL H. DAVIS, JR., SECRETARY

-2-

F. J. D.

With regard to the third point, which was not brought up at our discussion, that no member of the censorship committee should give out a statement which should convey "the impression that censorship is influencing or directing the manufacturers in any way in regard to the kind of pictures or method of treatment thereof, which are being made by them". Here, I think we should come to a clear mutual understanding.

It is obvious upon the side of the manufacturers that the censorship committee must not be placed before the public in the attitude of directing in any sense the work of the Patents' Company, and this is entirely agreed to. On the other hand, it must be equally clear that for the advantage of the Patents Company, as of the censorship itself, it is essential that the censorship shall have full authority to publish abroad that it is passing upon the films manufactured by the company, approving or rejecting.

Through such publicity, the creation of local censorships is forestalled, and censorships, already established, are brought to recognize and accept the verdict of the central body established here, and co-operating with the manufacturers.

I believe, thus, that we are entirely of accord in regard to the points raised.

I wish to further stress the importance of close co-operation in the near future, as I did at our interview.

## THE PEOPLE'S INSTITUTE

318 EAST FIFTEENTH ST.

NEW YORK

CHARLES SPRAGUE SMITH, MANAGING DIRECTOR

TELEPHONE 2411 STUYVESANT

HOWARD MANSFIELD, CHAIRMAN BOARD OF TRUSTEES

V. EVERT MACY, TREASURER

MICHAEL M. DAVIS, JR. SECRETARY

F. L. D.

-3-

The larger work lies ahead; the informing of the higher circles in education, the church, and elsewhere of the possibilities of the motion picture in the field of instruction and uplift, thus opening new and important spheres of activity and output for the film. Also the further important point that in the field of legislation co-operation, in order to forestall hostile, and promote favorable state and civic ordinances, is important.

A final word in regard to the Biograph Company. The Patents Company is inclusive of a number of companies, including the Biograph. In censoring for the Patents Company, as such, the scope must be all inclusive. If the Biograph be not included, then the censorship stands not for the Patents Company, but for the several manufacturers, who accept and approve of it.

I shall be glad to have a full understanding with the Biograph Company so that we may know whether from now on we are to censor for the Patents Company, or only for all the manufacturers thereunder, excluding the Biograph.

Sincerely,



Nov. 23, 1909.

Mr. Charles Sprague Smith,  
c/o Peoples Institute,  
318 East 15th Street,  
New York, N.Y.

My dear Sir:-

Your communication of the 19th inst. has been received, and I have forwarded copies of it to the several Licensed Manufacturers with the suggestion that if your statement meets their views of the case, they should so inform me, so that I can communicate that fact to you, and at the same time they can resume sending in their films to be censored.

I believe that your letter covers all the points raised by us, though I think you should be informed that the censoring is done not for the Patents Company as such, but for the individual manufacturers. The Patents Company is not in any way interested in the manufacture of film by its licensees and has merely provided a room in which the censoring of film can be done for the convenience of such licensees. The censoring of pictures is an individual matter with each manufacturer. It will be necessary,

#2

Mr. Chas. Sprague Smith.

therefore, for you to take the matter up separately  
with the Biograph Company, if that Company does not  
submit its pictures to the Censorship Committee.

Yours very truly,

GFE/ARK.

Vice-President.

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Nov. 23, 1909.

Mr. Charles Sprague Smith,  
c/o Peoples Institute,  
318 West 15th Street,  
New York, N.Y.

My dear Sir:-

Your suggestion in reference to meeting  
you occasionally to discuss matters is a very good one,  
and I shall be very glad either to take lunch with you  
myself, or have some influential manufacturer do so,  
so that we can keep in touch with each other.

Yours very truly,

GFS/ARK.

Vice-President.

**THE PEOPLE'S INSTITUTE**

318 EAST FIFTEENTH STREET  
NEW YORK

CHARLES SPRAGUE SMITH, MANAGING DIRECTOR

TELEPHONE 2411 STUYVESANT

HOWARD MANSFIELD, CHAIRMAN BOARD OF TRUSTEES  
V. EVERIT MACY, TREASURER

MICHAEL M. DAVIS, JR., SECRETARY

Nov. 24th, 1909.

Mr. Frank L. Dyer,  
Vice-Pres. Edison Mfg. Co.,  
Orange, N. J.

Dear Sir:-

Your communication of the 23rd at hand. I shall be glad to have word from you upon the receipt of report from the various manufacturers at an early date so that the interruption to the work of censoring may be as brief as possible.

In regard to the explanation touching the Patents Co., the situation will be presented in a clearer fashion hereafter than any statements made by the censoring committee. Hitherto, it has been stated that the committee was censoring for the Patents Co; a more accurate statement is that it is censoring for the several manufacturers who together constitute the Patents Co. rather than for the Patents Co. as such.

I shall delay communication with the Biograph Co. until after I have received word from you touching the replies from the other companies. If you have communicated with the Biograph Co simultaneously with the other companies, kindly let me know.

Believe me to be,

Faithfully yours,

*Smith*

*Charles Sprague Smith*



# KALEM COMPANY, (Inc.)

Manufacturers of

## MOVING PICTURE FILMS

Licensed under all patents of the Motion Picture Patents Company

235-239 West 23d STREET

Eastman Knoch Building

Foreign Branches

PARIS LONDON BERLIN

Western Union Code

Cable Address, KALEM

Telephone, 223 Clichee

NEW YORK, Nov 24, 1909.

Mr. George F. Scull,

Orange, N. J.

Dear Sir:-

We have yours of the 23rd together with carbon copies of Mr. Dyer's recent correspondence with Charles Sprague Smith for which please accept thanks. We are of the opinion that the censorship should be resumed along the lines laid down by Mr. Dyer and agreed to by Mr. Smith.

Yours very truly,

Kalem Co.

By *J. Marion*

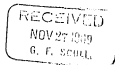
CABLE ADDRESS  
LUBIN, PHILADELPHIA

LOCAL AND LONG DISTANCE  
TELEPHONE CONNECTIONS

**Lubin Manufacturing Company**  
MANUFACTURERS OF  
MOVING PICTURE MACHINES AND FILMS,  
926-928 MARKET STREET,

PHILADELPHIA, PA., November  
Twentyfourth  
1909.

Mr. Frank L. Dyer, V.P.,  
The Edison Mfg. Co.,  
Orange, N. J.



My dear Mr. Dyer:

We voice your opinion that the Censorship  
Board conducted along the line that you have suggested,  
would be ok., and think it would be a benefit to the  
trade in general.

Very truly yours,

LUBIN MANUFACTURING CO.,

By W. Dyer

F.W.S.

L.B.

*Scuse*

AMERICAN MUTOSCOPE AND BIOGRAPH COMPANY  
11 E. FOURTEENTH ST. NEW YORK, N.Y.

November 27, 1909.

GEORGE F. SCULL, ESQ.,  
Edison Manufacturing Company,  
ORANGE, N. J.

Dear Mr. Scull:

Your letter of the 23rd instant, accompanied by copies of letters between Mr. Dyer and Mr. Smith of the Peoples' Institute, was duly received.

The Biograph Company has its own dispute with the so-called Board of Censors, and it intends to settle this dispute itself and in its own way.

It will therefore not unite with the other manufacturers in accepting the services of the Censors as outlined in the correspondence that accompanied your letter.

I thank you for the information that you sent me.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "J. J. Kennedy". The signature is written in dark ink and is positioned below the typed name "J. J. Kennedy".

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Nov. 30, 1909.

Mr. Charles Sprague Smith,  
c/o The Peoples Institute,  
318 East 15th Street,  
N.Y.C.

My dear Sir:-

Mr. Dyer duly received your two letters of the 24th inst. The matter of the Censorship will be taken up at a meeting of the Manufacturers which will be held on Thursday next, and Mr. Dyer will communicate to you the result thereof.

The Biograph Company have been informed of the correspondence between Mr. Dyer and yourself, but they have expressed a feeling that they wish to settle the dispute between the Censorship Committee and themselves directly, and it may be well for you to take up the matter personally with Mr. Kennedy, the President of that Company.

Yours very truly,

GFS/ARK.

Assistant to Vice-President.

TELEPHONE 2411 STUYVESANT

THE PEOPLE'S INSTITUTE  
DEPARTMENT OF DRAMA AND MUSIC  
318 EAST FIFTEENTH ST.  
NEW YORK

FREDERICK C. PATTERSON, SECRETARY

WILLIAM H. MAXWELL, CHAIRMAN EXECUTIVE COMMITTEE  
CHARLES SPRAGUE SMITH, MANAGING DIRECTOR

Dec. 1st, 1909.

Mr. Frank Dyer,  
Edison Mfg. Co.,  
Orange, N. J.

My dear Mr. Dyer,

As the one responsible for the reorganization of the Censorship committee, and as the one who has brought into association with it, a goodly number of the prominent men of this town, I feel it essential that I should know speedily what decision the various constituent members of the Patent Company have reached, as the days are passing and films are being issued without censorship. Furthermore, as I have stated in my last letter, we are employing secretaries and stenographers, and the financial agreement made six months ago has not been fulfilled in so far as the month just ending is concerned. I am not mentioning what is to be expected from now on. After our last interview, I understood that everything had been cleared up, that the financial arrangement would offer no difficulty and that the Censorship department would proceed with no interruption.

Such has not been the case, and I am compelled by my responsibility towards my associates to find out where we stand so as to take the action necessary in the premises.

Yours sincerely,

*Charles Sprague Smith*

737

Dec. 3, 1909.

Mr. Charles Sprague Smith,  
318 East 15th Street,  
New York, N.Y.

My dear Sir:-

Mr. Dyer directs me to say that at a meeting held yesterday of the Manufacturers licensed by the Motion Picture Patents Company, it was generally agreed that the adjustment of the differences between the Censorship Board and the Licensed Manufacturers was satisfactory so far as it had gone, but that the Manufacturers believed it desirable that you should adjust the grievances of the Biograph Company before the Licensed Manufacturers resumed their relations with the Board.

Yours very truly,

GFS/ARK.

Assistant to Vice-President.

THE PEOPLE'S INSTITUTE

318 EAST FIFTEENTH ST.

NEW YORK

CHARLES SPRAGUE SMITH, MANAGING DIRECTOR

TELEPHONE 2411 STUYVESANT

V. EVERIT HACY, TREASURER

FRANCIS R. MASTERS, SECRETARY

December 4, 1909.

Mr. Frank L. Dyer,

Vice-President and General Counsel

Edison Manufacturing Co.,

Orange, N. J.

My dear Mr. Dyer:

I have the communication of yesterday from your assistant.

According to an earlier letter, I understood that the Patents Company, as such, had not entered into relations with the Board of Censorship, but that the constituent members, each as an individual, had done so. It now appears that the constituent members, save the Biograph, are waiting upon the action of the latter before determining their own line of conduct. I can understand that a sense of comradeship and association should bring this about, but on the other hand, you will recognize that men and women, occupying the positions of public trust held by those on our general and executive committees, are altogether unready to stand longer in the uncertain position before the public which they now occupy. Their good name goes with the voucher they have given for all the films manufactured by the Patents Company, and for more than a fortnight no films, or only those of the Pathe Co., have been inspected.

I cannot hold up action on their part longer, in the sense of general notification being given to the country and to the local censorships who are now accepting our verdict, that the members of the Patents Company are no longer submitting their films to us. I enclose copy of a letter sent to Mr. J. J. Kennedy.

Sincerely yours,

*I have told Mr. Kennedy I must have a definite answer by Wednesday.* *Charles Sprague Smith*

[ENCLOSURE]

THE PEOPLE'S INSTITUTE

318 EAST FIFTEENTH ST.  
NEW YORK

CHARLES SPRAGUE SMITH, MANAGING DIRECTOR  
TELEPHONE 2411 STUYVESANT

V. EVERETT MACY, TREASURER  
FRANCIS H. MASTERS, SECRETARY

(Copy.)

December 4, 1909.

Dear Sir:

I enclose copy of a letter just received from the assistant of Mr. Dyer.

I have tried to get you on the 'phone, but without avail. I take it for granted you are aware of all the correspondence that has passed between the Patents Company and myself and also as to the oral discussion. I am going to ask you to get me on the 'phone at the earliest possible moment.

The members of our general and executive committees hold positions of trust and eminence in this community. Among the members of the Board of Censorship are the Superintendent of the Public Schools, Dr. Maxwell, two of his assistants named by him and others like Mrs. Rending, active in journalism. You will readily understand that these men and women are unwilling that there should be longer uncertainty as to the course of procedure. Their good name is going with the films manufactured and distributed by the various members of the Patents Company and this is now taking place without such films having been passed upon. I cannot hold back their action any longer. Indeed, they would have been ready to act ere this, if I had not advised, urgently, delay, in order that a work so beneficial to the public, and to the manufacturers also, should not be interrupted. I enclose copy of a letter sent to Mr. Dyer.

Sincerely yours,  
(Signed) Charles Sprague Smith.

To Mr. J. J. Kennedy,  
c/o Motion Picture Patents Co.,  
80 Fifth Avenue, New York City.

I must have a definite answer by Wednesday. (Sd) Charles Sprague Smith

THE PEOPLE'S INSTITUTE

318 EAST FIFTEENTH ST.

NEW YORK

CHARLES SPRAGUE SMITH, MANAGING DIRECTOR

TELEPHONE 2411 STUYVESANT

V. EVERITT MACY, TREASURER

FRANCIS R. MASTERS, SECRETARY

733  
Dec. 9, 1909.

Mr. Frank L. Dyer,  
Edison M'fg. Co.,  
Orange, N. J..

Dear sir:

I went over matters of mutual interest with  
Mr. Kennedy the day before yesterday, and we reached a  
full agreement.

I hope the carrying out of our understanding  
in the shape of our renewing the Censorship work and con-  
tinuing on the old basis will be effected immediately, as  
naturally, my committees are impatient with their present  
equivocal standing before the public.

I have suggested to Mr. Kennedy, that if necessary,  
we meet on Saturday afternoon or on Monday morning, to  
clear up anything that still remains. I mean the represent-  
atives of the manufacturers and myself.

Faithfully yours,

*Charles Sprague Smith*

733

December 10, 1909.

Mr. Charles Sprague Smith,  
The People's Institute,  
318 E. 15th St., New York.

My dear Sir:

Yours of the 7th inst. has been received, and I am glad to hear that you and Mr. Kennedy have reached a full agreement. I am therefore writing the various manufacturers tonight, advising them that the censorship will be renewed, and I imagine the next meeting will be held on Thursday, the 16th inst.

So far as concerns the renewal of the arrangement for a definite period, I find that there is a disposition on the part of some of the manufacturers to oppose this arrangement, and I therefore believe it would be better to let the matter run on from month to month, giving either side the option of discontinuing it on two weeks notice. I think we both feel that a formal contract is hardly necessary, because if any substantial number of the manufacturers wished to withdraw from the arrangement they could do so. To insist that the various manufacturers should enter into a formal agreement in writing to continue the censorship for a definite period would, I am afraid, precipitate a great deal of discussion which I think should be avoided.

Yours very truly,

ELD/IWW

President.

THE PEOPLE'S INSTITUTE

318 EAST FIFTEENTH ST.  
NEW YORK

CHARLES SPRAGUE SMITH, MANAGING DIRECTOR  
TELEPHONE 2411 STUYVESANT

V. EVERETT MACY, TREASURER  
FRANCIS R. MASTERS, SECRETARY

December 11, 1909.

737  
Mr. Frank L. Dyer,  
Edison M'f'g. Co.,  
Orange, N. J..

My dear Mr. Dyer:

It is essential that I meet, at once, with men who are empowered to act for the different manufacturers, and reach a definite settlement.

Our Committees are becoming impatient. The monthly payment for last month, November, due, according to our mutual agreement on the first of the month, is still in default, and a financial understanding for the future, of some kind, must be reached.

As I had made no other arrangements to secure funds, relying upon the fulfillment of the agreement, and the treasury is empty, I have ordered vacated the rooms occupied by the Censorship, transferred the office here, and am holding things in suspense.

Kindly communicate with me over the phone, as I am calling a meeting of the Governing Committee for an early date this week, and, unquestionably, they will insist upon a speedy decision that shall enable them to know where they stand, financially, as well as right then before the community in the matter of Censorship.

As to further agreements, I don't care to make them at long distance, nor of such a nature that they can be broken from one day to another. We need to talk them out and then either write them out, or put them in such shape that the honor of both parties is bound.

I think you will agree with me in all this.

Sincerely,

*Charles Sprague Smith*

#### **1909. Motion Pictures - Experimental (D-09-36)**

This folder contains correspondence and other documents relating to the technical development of films, cameras, and projectors. Included are items pertaining to the experimental work on color photography contracted to Charles L. Brasseur, the testing of film stock developed by the Eastman Kodak Co. and the Lumière Co., and the evaluation of improvements submitted to the Edison Manufacturing Co. by outsiders, including the Pathe Co., John H. Crosier, Hubert Meredith-Jones, and Charles M. Mapes. Among the correspondents are Frank L. Dyer, vice president of the Edison Manufacturing Co.; George F. Scull, assistant to the vice president; and Horace G. Plimpton, manager of negative production in the Kinetograph Department.

Approximately 50 percent of the documents have been selected. The items not selected include correspondence regarding improvements that the Edison Manufacturing Co. declined to pursue, as well as items that duplicate information in selected material.

D  
1909

M.P. - Film

483

Jan. 3, 1909.

Mr. Charles L. Brasseur,  
116 Fremont Avenue,  
Orange, N.J.

My dear Sir:-

7  
6  
10

This will introduce to you Mr. Willard Green, an expert photographer in the employ of Mr. Edison. I have had a talk with Mr. Green in reference to the difficulties in color photography, and it struck me that possibly some of the difficulties which Mr. Green sees in such processes generally may be involved in your own scheme, and I wish that you would explain to Mr. Green, for my benefit, your process, and particularly how you intend to overcome the difficulties which Mr. Green informs me are inherent in most color photography schemes. In other words, I wish that you would frankly answer any questions which Mr. Green may ask you about your process, so that I can be in a position to determine whether or not we can see sufficient hope in it to continue with your experiments.

Yours very truly,

GFS/ARK.

Vice-President.

LABORATORY OF  
CHARLES L. BRASSEUR  
116 TREMONT AVENUE  
ORANGE, N. J.

P  
1909 M.P. - Film

Jan. 15, 1909.

Frank L. Dyer, Esq.,  
Orange, N. J.

My dear Mr. Dyer:-

It will be necessary to decide, within a very short time, who is going to undertake to make up the photographic emulsion for my color samples. The reasons for this I will try to make clear.

As you probably know, all photographic emulsions are not fit for color sensitizing: one emulsion will work well with one sensitizer while another will fog with the same sensitizer. and as different sensitizers do not affect the different colors in the same way, it follows that the colors employed on the negative screen vary somewhat with the sensitizer employed. For instance, supposing that to correctly reproduce colors, you need at C of the spectrum a density of say 2, and at D a density of say 3, and that you find that the sensitizer employed in the emulsion is so sensitive at D, that the silver density will be 5 instead of 3, it will be necessary to modify the color so as to reduce the absorption at this particular point. What is true for that color is so for the entire spectrum. Moreover, an increase of the sensitiveness of the emulsion does not necessarily mean the same proportional increase of sensitiveness for all the colors. Of course, I employ compensating screens in my lens, by means of which I can make corrections quite sufficient

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CHARLES L. BRASSEUR  
116 TREMONT AVENUE  
ORANGE, N. J.

F. L. D. #2.

for the changes which occur in a given emulsion, and also, to equalize the changes in the quality of the light, but it is well to start out with some standard.

Personally, I had intended asking Cramer of St. Louis to do this and have been experimenting with his plates. He is a very scientific man, has had large experience, and is not in the trust, but of course, if you prefer asking the Eastman Co., then, I presume the Seed Co. of St. Louis, will be the one to do it, as they alone of the Trust Companies, turn out good color plates. Of all things, I want to guard against a repetition of my experience in France. There, I was promised emulsions and delayed and delayed month after month while they were experimenting on their own account.

As to the necessity of getting at this soon, you must understand that I cut up only stained films, as a color can be readily measured when a large surface is employed, but this cannot be done with anything like the same accuracy when the dyeing is done after the material has been cut up. In fact to determine the colors and the sensitiveness of the emulsion, the test had better be made with films of one color. These colors are now ready; all have been tested for their light resistance to the arc light in actual working conditions; none have been kept which have shown the least change when passed through the lantern 1000 times, each exposure being  $1/16$  second. It may interest you to know that only a little more than 50% of the colors submitted (272)

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116 TREMONT AVENUE  
ORANGE, N. J.

F. L. D. #3.

have stood this test.

As to other matters; the machine has been entirely rebuilt and will be delivered to us on Monday. We had to do this as apparently the only cause of the breaking of the thread and therefore, the entanglement of the machine, was due to a slight eccentricity in the cutters, which meant that one part of the film would be cut and pulled a minute fraction of an inch ahead of the other. Absolutely, of course, this is inevitable; a certain play of the parts must be allowed, else the cutters cannot be mounted, but we have had the shafts ground to the 1/10000 inch; the cutters and every part have been made over with like accuracy. Moreover, a grinding attachment has been made by which all cutters will be ground simultaneously after being mounted on the shaft. The next thing is to attach a paraffining machine, so as to make a solid sheet of threads, as the latter come from the machine, and then cut up these sheets transversely. We have been studying this up and will take it up further as soon as the machine is in.

As to the new lantern, the purpose of which is to obtain a larger amount of light without increasing the amount of current consumed, this is well underway; the lamp is ready and I have been promised the lenses this week. I hope there will be but little delay here.

As to the contact prints I have promised you, you will have these in the next few days. My original arrangement was rather primitive and it was difficult to obtain great accuracy. I

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CHARLES L. BRASSEUR  
116 TREMONT AVENUE  
ORANGE, N. J.

F. I. D. #4.

have a new one finished today; new and very luminous screens have been made and while it is difficult to adjust colors when the only examination you can make is on grains of very small diameters still, I am satisfied that the result will amply meet your expectations.

Kindly let me know your opinion in regard to the above and oblige

Yours very truly,

*Charles L. Brasseur*

EDISON MANUFACTURING COMPANY.

D  
1909 M.P. - Film

Jan. 20, 1909.

Charles L. Brasseur, Esq.,

Orange, N. J.

My dear Mr. Brasseur:

Thank you very much for your interesting report of Jan. 15th. Exactly what is it that you wish to have Cramer of St. Louis do for you? Is he to make the complete film or simply buy the celluloid strips and apply the emulsion to? I wish before doing anything finally in this matter you would let me know in a general way what the cost will be.

Yours very truly,

Vice-President.

FLD/IWW

*Charles L. Brasseur*

LABORATORY OF  
CHARLES L. BRASSEUR  
116 TREMONT AVENUE  
ORANGE, N. J.

*Edison*  
*Smith -*  
*Read and see*  
*me Dyer*  
Frank L. Dyer, Esq.,  
Orange, N. J.

*D*  
*1909 m.p. -*  
*Film*  
Feb. 1, 1909.

Dear Mr. Dyer:-

I have read with interest the article you sent me entitled "Animated Pictures in Colors," As far as I can see it relates to the same process about which I wrote you on August the 10th of last year. I take this occasion to return the letter of that date as well as the patent describing a similar process by Messrs Lee & Turner.

The method, whatever it is, calls for at least double the length of film used in my own, as there are thirty-two pictures taken per second and moreover it calls for an addition to the projection apparatus. The one very interesting point as far as I am concerned, is that the reds were photographed in an exceedingly short period of time, less than one-half of the time which I will have at my disposal.

As to the two-color phase of this question, I fear that to comment on such garbled reports as newspaper men are capable of making, would be an injustice to Mr. Smith. All I know of the two-color process is, that some years ago I saw some two-color lantern slides made, if my memory serves me right, by a Mr. Smith of Zurich. I do not know whether this is the same party or not, but the examples shown were pure charlatanism. A landscape was reproduced by means of a yellow and a blue print, the yellow and blue making the green trees, and the blue, the sky and the reflections in the water. The whites were, of course, white. That

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F.L.D. #2.

is not natural color-photography. In this case the red seems to have been reproduced, which would indicate that another color has been used. The statement attributed to Mr. Smith that "three was not necessarily a magic number" is true in one sense of the word. The experiments of Young, of Helmholtz, of Maxwell, of Abney and the practical application of these experiments to color-photography by Mr. Ives and myself have shown <sup>the</sup> three sensation ~~in~~ theory to be a hard physiological fact. But if Mr. Smith's statement, that you can make white by projecting two colors implies that you can make all colors by a mixture of two colors, then, that is decidedly magic. It is of course possible to make white with two colors, for instance, a purple and a green make white; a red and cyan blue make white; a yellow and a blue make white, but in all these cases use is made of one primary color and one binary, i.e. a purple and a green really means a red plus blue, making purple and a green which accounts for the three primary colors. It might be, and this is only a conjecture on my part, that Mr. Smith photographs through two filters, the reddish orange and the green and depends on an excessively short exposure without any filter to obtain the blue. As you know, every ordinary photograph is only a record of the blue and violet rays. Even in that case it would be necessary to make the projection through the two red and green filters and the third photograph which had been taken without a filter would have to be

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116 TREMONT AVENUE  
ORANGE, N. J.

F.L.D. #3.

projected through a blue filter. I believe this conjecture of mine is not very far wrong. As soon as I can find time, I will look up the technical papers to see if I cannot get more precise information and will communicate to you whatever I find of importance.

I regret I cannot give you information more to the point and remain

Yours very truly,

*Charles L. Brasseur*

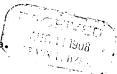
[ENCLOSURE]

PHYSICAL LABORATORY

CHARLES L. BRASSEUR

116 TREMONT AVENUE  
NEW YORK, N. Y.

116 Tremont Ave.



Orange, N. J. August 10, 1908.  
New York,

190

*Reg. Smith*

My dear Mr. Dyer:-

My attention has been called to some newspaper articles relating to the Smith process of color-photography as applied to moving pictures. If I understand it correctly, the photographs are made through alternate discs of red, green and blue screens; the color record of each color photograph consisting of three successive black and white photographs on a continuous film. It follows that, theoretically, the color film would be three times as long as that which I am now working on, that is, instead of a 400 ft. film, a 1200 ft. film would be required. Practically, I do not think that the increase of length would be as great as this, as there is a psychological factor which it is impossible to determine except by experiment. The projection of the picture is made in a special machine having revolving discs alternately red, green and blue and through which the colorless photographs are projected.

Now, as far back as 1901, I published in the Journal of Photography of Great Britain, the fact that all the colors of the spectrum could reproduced by successively presenting to the eye different proportions of red, green and blue in order to obtain all the colors of the spectrum, and it may interest you to know that, since I have been here, I have made up a spectrum on film by that method intending to show it to you when you called on me as Mr Wilson had announced. What I am driving at is this, that I can without "poaching on Mr. Smith's preserves" make up a film

[ENCLOSURE]

PHYSICAL LABORATORY  
CHARLES L. BRASSEUR  
10 EAST 19TH STREET,  
NEW YORK.

New York,

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-2-

in which the alternate pictures would be backed by a red, green and blue film as shown on the accompanying sketch and which would have the advantage of its being possible to use it on the present machine without any change whatsoever in the machine. Instead of being a colorless picture, as Mr. Smith's is, the pictures will be alternately red, green and blue and there would be no revolving disc to complicate the mechanism of the machine. In fact, many variations of this idea can be readily imagined. The picture can be made in broad alternate stripes of red, green and blue, the one necessary factor being, that, on three successive pictures the red, green and blue stripes shall be directly one over the other.

I believe a patent could be secured for this, in view of my former work, without much trouble. I do not believe that it is by any means worth the process I am now working on. The latter has the advantage that the film is of the same length as the black and white, and that the red exposure is the same as that of the entire picture, while on Mr. Smith's the red exposure is much less, necessitating therefore very fine weather in which to do it.

Kindly consider the matter and when you have time I will call on you, or what would please me very much better have you call on me and have you see the laboratory.

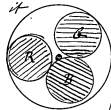
I remain,

Yours very truly,

*On returning from U.S. I  
then go on evening Wednesday  
at 3.30* *Chas L Brasseur*

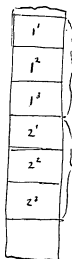
[ENCLOSURE]

*Simple method of  
an introduction  
it*



*What  
gives the  
more results  
but without  
changing  
machines*

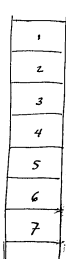
*Method  
I am  
now  
developing.*



(1)



(2)



(3)

[ENCLOSURE]

PHYSICAL LABORATORY

CHARLES L. BRASSEUR  
19 EAST 10TH STREET,  
NEW YORK.

New York,

190

1 Smiths method.

Three pictures to form one -  
Film colorless -  
Rotating disc to obtain colors

2 Method I would propose if same  
effect is desired

Three pictures to form one -  
Film colored -  
No changes in machine.

3 Method I am developing.

Each picture is complete in itself.  
No changes in machine

[FROM DYER SMITH]

February 15, 1909.

Mr. Dyer:

Referring to the enclosed letter from Mr. Brasseur relating to colored moving pictures, Mr. Brasseur states that the process in the article entitled "Animated Pictures in Colors" apparently relates to the same process about which he wrote you last August. That process was the one in which the phenomenon of persistence of vision was made use of to mingle the three primary colors together to produce the effect of the natural colors. I filed an application for Mr. Edison on this subject August 13, 1908, in which I referred to the possibility of using the modification proposed by Mr. Brasseur namely, to color the films themselves in some way, instead of using a colored shutter.

There is apparently nothing in this broadly, but if a number of people are considering the process as commercially feasible for moving pictures, it would be well to take out patents on any specific improvements or specific devices connected with the process that Mr. Brasseur or any one else might think of.

D.S.

DS/JS

*Noted*

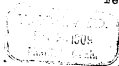
LABORATORY OF  
CHARLES L. BRASSEUR  
116 TREMONT AVENUE  
ORANGE, N. J.

D  
1909 M.P. - film

483

Feb. 23, 1909.,

Frank L. Dyer, Esq.,  
Orange, N. J.



My dear Mr. Dyer:-

*Thomas*  
I am sending you herewith a contact positive which I think will interest you. I have endeavored to unite some of the difficulties of color reproduction and am glad to say, have, I believe, been very successful. I will call your attention, first, to the gradations of black and white, white, grey and black in the plaid dress; the two extreme colors of the spectrum, red and blue; the very delicate coloring of the face, hand and hair. The inequality of the silver deposit towards the middle of the plate give a rather weak ground, but this is not due to the negative. As soon as I receive new plates I will make over the positive.

The negative and the positive that I herewith send you have not been retouched in any way whatsoever. I will make up in a few days some subjects presenting other difficulties and then I think that you will probably be sufficiently satisfied to warrant my discontinuing this particular kind of demonstration until my own films are ready.

We have today sent the machine in to New York to have the gears put on which are necessary to run it by power, a preliminary step to enable me to do the grinding. The machine is now, we believe, in its definite form. As soon as it has been returned we

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116 TREMONT AVENUE  
ORANGE, N. J.

F.L.D. #2.

will have it worked continuously for a week or ten days, and, if that proves satisfactory we will be in position to begin cross-cutting. There have been many difficulties encountered in obtaining satisfactory metal. A Swedish mill which had sent me some very beautiful steel has just cabled me that they will not undertake to grind it down thinner than the material I now use. A French mill has sent me polished tempered steel of half the thickness, but it was not absolutely smooth. This was probably due to defects of the machinery employed. I have instructed them to cable me whether they could overcome this or not. If they do not, I will have to take the bull by the horns and do the final rolling and grinding of the material at the laboratory. What has been done outside has cost a great deal and is never as satisfactorily finished as it ought to be. The tempering done by Brown & Sharp has been very satisfactory, but they decline to do the polishing. I am sorry to have to trouble you with such details, but unless you are acquainted with them it is hard to realize the amount of time and patience necessary to overcome what appear to be, minor difficulties. I have not yet gone to St. Louis, and will not do so until after the final trial of the machine.

I remain,

Yours very truly,

*Charles L. Brasseur.*

[MARCH 22, 1909]

*file*  
Memo. No. 502.

Messrs. Wilson, Weber and Scull:

You are appointed a committee to thoroughly investigate the present situation of Mr. Brasseur's work and to recommend whether the work should be dropped or be continued for a further period of a year.

I would like to have this report at the earliest possible moment, so that a decision can be made without delay.

It seems to be reasonably clear that, theoretically, Mr. Brasseur's plan is correct, but you had better satisfy yourselves on this point by seeing, if possible, the actual printing and developing of a colored positive.

My own opinion is that the problem to be solved is purely a mechanical one, namely, whether an enormous number of microscopic celluloid globules can be made, tinted and applied to a celluloid strip, with sufficient economy to make the process practical. Possibly you might satisfy yourselves that the process of making these globules that Mr. Brasseur is working on may be changed so as to be practical.

Mr. Scull is to report, in addition, briefly on the patent situation, so that we may know that if we go ahead our protection will be sufficient; and also, if Mr. Brasseur should leave, whether we could go ahead ourselves on the same lines.

Your report should take into account also that probably within the next year the celluloid film will be a thing of the past and the non-inflammable film substituted. You want to satisfy yourselves that the process can be carried out with the non-flammable film.

ELD/IWW

F. L. D.

EDISON MANUFACTURING COMPANY.

*Edison*

April 6, 1909.

Mr. Horace C. Plimpton,  
Manager Negative Production,  
Bronx Studio, New York.

Dear Sir:

I may have told you that the Lumiere Co. submitted to us for trial some positive and negative film, which I believe was turned over to Mr. Moore. I wish you could look this up and have it tested. The identity of the film should not be disclosed, if possible, to anyone, because I do not want the Eastman people to know that we are experimenting with other films.

I am advised that this film is three times faster (both negative and positive) than the Eastman film, so that the camera operator should be advised accordingly.

Have a test made with the Lumiere negative and advise me as soon as the exposure has taken place, because the Lumiere people wish to have one of their men attend to the developing.

It might be a good plan to use this Lumiere in the second camera so that the same picture can be taken on both the Eastman and Lumiere films and a comparison of the two thereby made. Do not run the risk of using the Lumiere film alone.

I am anxious to have this test of the Lumiere film made

Horace G. Plimpton.

EDISON MANUFACTURING COMPANY.  
(2)

APR 4/6/00.

immediately, because we are having so much trouble with the  
Eastman negative, and some relief might be secured by trying the  
Lumiere negative.

Yours very truly,

EDD/IWW

Vice-President.

THOMAS A. EDISON,  
PRESIDENT

FRANK L. DYER,  
VICE PRESIDENT & GENERAL COUNSEL

C. H. WILSON,  
GENERAL MANAGER

A. WESTEC,  
SECRETARY & TREASURER



## EDISON MANUFACTURING CO.

MAIN OFFICE AND FACTORY  
ORANGE, N.J.

### EDISON PROJECTING KINETOSCOPES AND FILMS.

THOMAS A. EDISON

IN REPLYING ADDRESS THE COMPANY NOT  
THE INDIVIDUAL AND MENTION THESE INITIALS.

10 FIFTH AVENUE, NEW YORK  
304 WABASH AVENUE, CHICAGO.

CABLE ADDRESS  
"KURILIAN, NEW YORK"

ADDRESS YOUR REPLY TO

Edison Studio-Bedford Park

*New York*

April 27th, '09.

Mr. Frank L. Dyer, Vice President,

Edison Manufacturing Co., Orange N. J.

Dear Sir:-

Lumiere Film:- In reference to the Lumiere Film, two tests have been made of it. The first one as I previously wrote you, was taken in 21st, St., duplicating a scene in one of our pictures. The second one was at the request of the Lumiere representative, taken out doors. I am told that the develop<sup>ed</sup> negative shows certain defects, which are described as looking like air bubbles. It was suggested by the Lumiere people, that we make further experiments, but I thought best to let you know as to what had been done thus far.

Very truly yours,

Edison Mfg. Co.

Kinetograph Department,  
*Francis B. Thompson*  
Mgr. Negative Production.

M/H.G.P.

*Edison  
Manufacturing*

*65-11*

RE.  
APR 28 1909  
FRANK L. DYER.

*M.P. - Patents*

April 27, 1909.

Mr. Dyer:-

In re. your memorandum No. 502: There are two points in Mr. Brasseur's work which appear to be of prime importance. The first is the printing of a positive from a negative. Mr. Brasseur's method is to use a mixture of lights of the three primary colors in the proper proportions. By his method he is able to obtain a positive print of a Lumiere negative on a Lumiere plate. This method of printing appears to be novel and more simple than any of which I am aware. Mr. Brasseur assured Mr. Smith and myself this morning that he has a pending application covering this method in the U.S. Patent Office, the claims of which have been rejected on the ground that his method of printing was an obvious thing to do. I believe, in the absence of any references, that the Office will not be able to maintain its position. There may be, however, other objections, but since Mr. Brasseur has not given us a copy of this application (which, however, he has promised to do at once), I cannot say how much protection he can get.

The second important principle is in the making of a color screen of the same material as the support therefor, the color screen being made integral with the support by direct union with it, without the use of any adhesives. Mr. Brasseur has allowed claims covering this point already.

If Mr. Brasseur succeeds in producing colored photographs by the methods which he is now using, he would be able to prevent any one from making colored screens on any form of film, whether fire-proof or otherwise, in which the globules are rolled directly into the support. If he succeeds in getting any claims covering his apparently novel printing method, it would appear that he would be protected in the use of a very simple printing process, though, of course, it is possible that other means of printing can be devised. If we should decide to go ahead ourselves independently of Mr. Brasseur, we would be obliged to at least avoid these two important points, which, on the face of things, appears rather difficult.

G.F.S.

GFS/ARK.

J. WALTER DOUGLASS  
810-12 NORTH AMERICAN BUILDING  
CABLE ADDRESS "WOOLINE"  
TELEPHONE CONNECTIONS

PHILADELPHIA, PA. May 10, 1909.

Frank L. Dyer, Esq.,

Vice-President & Gen'l. Counsel,

Edison Manufacturing Co.,

Orange, N. J.

My dear Sir:-

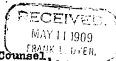
Mr. Crosier and myself, will be at your office on Wednesday morning of this week between ten and twelve o'clock, to take up with you practically and fully the new Crosier Safety Machine, and the new Crosier Dissolving Shutter.

Yours very truly,

*J. Walter Douglas*

*Walter*

*M.P. - Patent*



D  
1909

M. P. - Film

483

RECEIVED  
MAY 15 1909  
FRANK L. DYER

Orange, H. J.

for me

Would it be convenient for you to obtain a few feet of the new Eastman non-inflammable film, with or without the emulsion. In my attempts to increase the durability of colors I was led to try what the effect of denitrating the film would have on the life of the color, and I find the result so encouraging that I would like, if possible, to make comparative experiments with this new film.

Thanking you in advance, I remain,

Yours very truly,

Charles L. Brewster

Plimpton has all  
the negative stock

Det Bureau  
100 Park St  
5/18/59

Wachen - 10/19/94  
Sent 5/19/94  
negative 5/19/94  
Lm skin from  
Jammes - Positive  
25 feet spread  
little Jammes on  
want not for. 2 mm  
negative not  
sufficiently  
Dm

REFER TO THIS NUMBER  
IN YOUR REPLY

636

FRANK L. DYER,  
ORANGE, N. J.

MEMORANDUM

May 14, 1909.

Mr. Scull:-

I hand you herewith copy of the Scientific American of May 15th, containing two articles on Color Photography for motion pictures. Let me have a report as to your opinion of these articles.

F.L.D.

FLD/ARK.

*film*

May 19, 1909.

Mr. Dyer:-

Your memo. No. 636. Nothing of interest in either of these articles. The first is merely a small camera by which three small photographs ~~is~~ taken through different filters are obtained on one plate, so that it can afterwards be projected in a lantern to be produced in color on a screen.

The second is an account of Urban experiments with the use of pictures projected alternately through different colored screens, the improvements being the use of two screens instead of three, in order to cut down the total number of pictures and the necessarily increased speed of taking. The effects obtained are not good.

G.F.S.

*Notes*

REFER TO THIS NUMBER  
IN YOUR REPLY

688

*Walter  
attention  
7/26/09*  
**MEMORANDUM**

*film*  
**FRANK L. DYER,**  
ORANGE, N. J.

Mr. Scull:

5/26/09.

Remember that you are to go out to Chicago this week, and I suggest, therefore, that you send out to Mr. Daniels a portion of the fireproof film in order that he can coat it, so that when you go out you can make tests of its fireproof qualities, or in other words, determine whether the celluloid coating will make it inflammable.

F.L.D./IWW

F. L. D. *[Signature]*

M.P. - Film

763

May 26, 1909.

W.D. Daniels, Esq.,  
National Waterproofing Company,  
2115 West Adams Street,  
Chicago, Ill.

Dear Sir:-

My assistant, Mr. Scull, will arrive in Chicago on the Pennsylvania Limited, on Friday morning, to look into the matter of the waterproofing process and the patent applications, according to our agreement. He will probably be at your office sometime between 9 and 10 o'clock in the morning, and of course I should like to his investigation facilitated, so that he can return as soon as possible.

I am sending by this mail a section of film, part of which is on the new Eastman non-inflammable stock, and I should like to have you test this immediately on its receipt, so that it can be tested while Mr. Scull is in Chicago, to determine whether or not the coating still adheres properly and also whether or not the film is rendered inflammable by the coating.

Yours very truly,

GFB/ARK.

Vice-President.

REFER TO THIS NUMBER  
IN YOUR REPLY

715

**MEMORANDUM**

FRANK L. DYER,  
ORANGE, N. J.

Mr. Holden:

6/1/09.

I hand you herewith specifications and blue prints of application of E. F. Murdock relating to a projecting machine somewhat along the lines of our scheme. Look them over carefully and advise me whether you think the idea is worth further investigation.

FLD/IWW

F. L. D.

Enc-

AC

June 3, 1909

Mr. Dyer:

Replying to your memorandum No. 715. I have read over the specification of Mr. Burdock in connection with the blue prints. The specification refers to additional figures, namely, Figures 4 and 5, which are not shown in the blue prints, but I think I understand all that this inventor has in mind.

The drawings are diagrammatic. The mechanical difficulties of constructing a machine operating upon the principles disclosed would be very great.

The leading idea of the inventor seems to be to eliminate flickering by having a picture constantly upon the screen, using mirrors to progressively illuminate one part of the film and simultaneously and progressively obscure another part of the film. In this particular sense the invention resembles that which we made several years ago, but it differs from this in that the pictures are not exhibited in the correct and proper order for producing the illusion of motion, as said motion actually took place, but the pictures are exhibited in an order like this: 5 - 4; 6 - 5; 7 - 6; 8 - 7; 9 - 8, etc.

In the device of Figures 1 to 3, there is a direct illumination of the film from the source of light and the rays pass directly into the upper objective from the film. There would, therefore, be an image of the usual brightness upon the screen from the upper objective. The rays which pass through the lower objective, have, however, been reflected four times and the image on the screen from this objective would therefore be much less bright than from the first objective.

The lower objective is for the purpose of producing an image while the film is traveling, the upper objective being for producing an image when the film is at rest. Possibly the images from the lower objective would be on the screen for shorter intervals than the brighter images, and hence owing to this and their comparative dimness the fact of their being out of sequence might not be so very noticeable, but I do not think so.

The arrangement is such that when the film is traveling, the distance of the focal plane of the film from the objective, measured along the path of light, diminishes, therefore it is necessary to move the objective simultaneously with the film. This would seem to be a serious disadvantage and probably a fatal one as the travel of the objective would have to be such as not only to keep the film in one focal plane, but the screen in the other. This might be done for a screen at a given distance, but how would it work with a screen at a different distance, for instance, twice as far from the objective? The use of two objectives is also very objectionable.

From the specification, however, I take it that in Figure 4, only one objective is used, and this could be done by placing the mirrors as shown in pencil in Figure 1. With this form of device, however, it would still be necessary to move the objective during the travel of the film to compensate for the variation in distance of the focal plane of the film.

In conclusion I would say that I do not consider the invention worth further investigation for the reason that the mechanical difficulties in getting up an operative machine would

be much greater than in the case of our invention, and even if an operative machine were obtained, it would not project the pictures in their proper sequence for reproducing the motions which actually occurred. It seems to me that the moving parts would jump back and forth in a very ludicrous manner if the pictures of the film were exhibited in the order suggested by this inventor.

In other words, it seems to be subject not only to all the disadvantages which might be present in our apparatus, but to additional disadvantages and difficulties, and if these could be successfully overcome the result would be merely the exhibition of pictures out of their proper sequence, which I should think would be anything but a natural reproduction of the scene which was photographed.

DH/MUL

*Delos Holden*

752

June 4, 1909

J. Walter Douglass, Esq.,  
210 North American Building,  
Philadelphia, Pa.

My dear Sir:-

At Mr. Dyer's direction I have given considerable attention to the device of Mr. Grosier, which has been submitted to this Company, and have reported to Mr. Dyer. Mr. Dyer directs me to say that we have found that Mr. Grosier's device is very ingenious and effective, but from a commercial standpoint it is one which this Company does not care to undertake to market. It appears that there is probably more refinement in the device than the average moving picture theatre or even a considerable number of them, would be willing to bother with or pay for, and moreover, in a relatively short time the non-inflammable film will replace the inflammable kind, and in such an event many of the features of the device will become practically useless. In addition to the foregoing, it may be noted that at the present time there is a campaign of education on to induce proprietors of moving picture shows to operate in a room sufficiently lighted to enable the reading of

#2

J. Walter Douglass, Esq.

large print. This is perfectly feasible and is being done in many theatres, and of course, when all theatres are thus equipped, the necessity for throwing on the house lights when the machine stops will be largely obviated.

Mr. Dyer wishes me to thank you for having submitted the device to him for his inspection.

Yours very truly,

CFS/ARK.

Assistant to Vice-President.

Motion Picture

Personal  
Ans 7/12

Say that Pathe Freres of Paris France  
have made some films of this character  
+ they would be certain to know  
of the other workers as many  
of this work was done in France



DEPARTMENT OF PUBLIC HEALTH, QUEENSLAND,

the screen picture which I stated  
BRISBANE. 4th June. 1909

We were experimenting with, was

Dear Mr. Edison, soon after made + introduced in  
the ~~theatres~~ of this country -  
You may possibly remember receiving a letter some  
fourteen or fifteen years ago from a student at Guy's Hospital,  
London, suggesting the advisability of throwing moving pictures  
on to a screen. ~~about~~ <sup>at</sup> that time your Kinetoscope machines  
(penny in the slot) were attracting much public interest in  
London. I think with you that the introduction  
of Kinetoscope pictures in schools would  
The idea occurred to me, (during a clinical lecture at Guy's  
Hospital on "Gait, as a means of Diagnosis"), that if the moving  
picture - as viewed by one person at a time in the Kinetoscope -  
could be thrown upon a screen, as in the case of a lantern  
picture, so many hundreds of persons would be able to view it  
at the one time. I (if you will pardon a lapse into the ego-  
tistical first person) wrote to you on the matter and pointed  
out the immense advantage such an arrangement would be over the  
old method of exhibiting the picture.

To my letter your manager at Orange kindly ~~replied~~ <sup>replied</sup> to the effect  
that no apparatus had up to that date been devised whereby the  
moving picture could be thrown upon a screen, but that "experi-  
ments would be made in that direction and if successful I  
should be again communicated with." I may say that I never  
heard from you again but some considerable time afterwards the  
"Cinematograph" was exhibited at the Empire Theatre in London.  
I take the liberty of mentioning the above merely as an excuse  
for a suggestion, which I feel sure, Sir, you will pardon my  
making, to the effect that the "Cinematograph", "Biograph" or  
other apparatus for projecting moving pictures, has great

potentialities as an Educator in our Schools and Colleges -  
educational, technical and medical.

"Moving pictures" as a source of amusement can be found in  
every city and town throughout Australia, but are practically  
unknown as an established method of education.

I understand that quite recently the fields of Science, Medicine,  
Bacteriology, etc., have been explored for 'subjects', and some  
very instructive and interesting Films secured as a consequence.  
Should you know where such Films could be purchased, may I ask  
the great favour of being furnished with the address of the  
maker?

Faithfully Yours,

*B. Burnett Ham*  
M.D.

Commissioner of Public Health for Queensland.

Thos. A. Edison. Esq.,

Lakeside Avenue.

Orange, New Jersey. U.S.A.

EDISON MANUFACTURING COMPANY.

915

June 5, 1909.

E. F. Murdock, Esq.,  
Tribune Building,  
New York City.

My dear Mr. Murdock:

Your favor of the 2nd inst. was duly received in reference to your application for a method and machine for producing moving pictures. I referred the matter to my associate, Mr. Holden, who has given considerable thought to the problem of reducing flicker, and he has made quite a full report, in which, after discussing various objections that he sees in your scheme, he says:

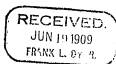
"In conclusion I would say that I do not consider the invention worth further investigation, for the reason that the mechanical difficulties in getting up an operative machine will be very great, and even if an operative machine were obtained, it would not project pictures in their proper sequence for reproducing the motions which actually occur. It seems to me that the moving parts would jump back and forth in a very ludicrous manner if the pictures of the film were exhibited in the order suggested by the inventor."

I therefore beg to return the application papers herewith and thank you very much for bringing the matter to my attention.

Yours very truly,

ELD/IWW  
Enc-

Vice-President.



*Film*

June 17th, 1909.

Mr. H. G. Plimpton:

After making several tests of the new Eastman negative and positive film, we found the speed, quality and action during the course of operation is about the same as our present film. The texture of the stock is much harder and not so flexible and do not think it will stand the wear and tear as our old, but this can only be determined by time. We also at the same time made comparative tests of the Lumiere negative and positive, the negative proved to be equally as good in every respect, as the Eastman. The positive is not so clear and brilliant as the positive we are now using.

(Signed) E. S. Porter.

Copy.

[FROM CARL H. WILSON]

Mr. Weber:

In a conversation yesterday with Mr. Waters of the Kinetograph Co., he stated that considerable trouble was experienced with films, on account of poor joints made by outside people, principally by picture machine operators, who, in case a film came apart, would rejoin it by simply slapping on a little cement and holding the two ends together with their fingers, instead of using a film joiner.

He also pointed out that the cost of the film joiner which we list was so high that a great many people would not buy it, whereas if we could get out a cheaper joiner, something to list at \$2.50 or \$3.00, he thought one could be sold to almost every exhibitor in the country.

Won't you please look into this and see if a simple and inexpensive joiner cannot be devised.

9/14/09.

C. H. W.

~~Supplied to Weber~~

Copy to Mr. Dyer.

RECEIVED  
SEP 15 1909  
FRANK L.

LABORATORY OF  
CHARLES L. BRASSEUR  
116 TREMONT AVENUE  
ORANGE, N. J.

Sept. 14, 1909.

Frank L. Dyer, Esq.

Dear Sir:-

As I told you in my last interview with you, just before you sailed, one of the difficulties to be overcome was the cementing together of the celluloid pieces when use is made of flowed film as distinguished from cut film. The completion of the cutting machines made the immediate solution of this problem one of vital importance.

In the trade, cementing is of daily occurrence, but the sheets so cemented are cut of green or fresh stock in a veneering machine. Not having one of these, I had to look around for ways to overcome the difficulty, and after being non-plussed for some weeks, am glad to say that I have finally found a solution of the problem.

What happens, apparently, when using flowed film is, that with the slow drying of the film, the more volatile elements such as camphor, etc. evaporate and leave a hard, non-plastic surface and it follows that when, as in my case, you use a film 1/800" thick, this film is practically made up of two non-plastic surfaces which it is impossible to cement to other like surfaces.

Having hit upon the cause, the remedy was obvious, and I have now succeeded in cementing three sheets together and obtaining therefrom triple threads, i.e. threads of three colors. I still have to study the dosing a little more and to find the amount of heat and pressure which will just weld them together without mixing

I have had extra sensitive gauges put on the boiler,

LABORATORY OF  
CHARLES E. BRASSEUR  
115 TREMONT AVENUE  
GRANITE, N. J.

F. L. D. #2.

on the press and on the cutting machine, and have put on steam traps where necessary, all for the purpose of determining with great precision the best working conditions.

As to the thread cutting machine, we have received the imported steel. To my regret, it is not up to expectations as to thickness, but on Mr. Wilson's advice have accepted it rather than wait three months more for a thinner lot. The manufacturers have been very decent about the matter and have asked me to name my own price for what I could use, which matter is now the subject of correspondence. I have enough thin steel to mount two inches of discs at 800 per inch, and this will be done as soon as the rolled German silver is received. This could not be ordered before we knew exactly what the thickness of the steel was, but it will be ready in a very few days.

The cross-cutting machine was delivered a month ago. New gears, of a different ratio have had to be put in to enable it to cut 1/1000". I have had a steam box fitted to it so as to be able to use it for veneer cutting or for cross cutting the threads. It will cut a section about one inch square, about the size of a moving picture, and I hope to be able to cut blocks made up of compressed tri-color threads without any trouble. A new brake is still to be fitted, as the original one gave a certain amount of back lash, which, on such a thickness, 1/1000", was a cause of *app*reciable irregularity. The makers claim to be able to do away with this altogether.

LABORATORY OF  
CHARLES L. BRASSEUR  
114 TREMONT AVENUE,  
ORANGE, N. J.

F. L. D. #3.

As to the photographic emulsion which I had intended having done in St. Louis, I have concluded to do it myself and have fitted up a dark room for it. It will save considerable money to do this and while I may not be able to get extremely sensitive emulsion, it will be easy, by comparing mine with that now in the market to allow for this difference.

The light concentrating lens has been received and works admirably. It will enable me to print color films quite as quickly as black and white are now printed. I have not yet been able to agree with my lens grinder as to a formula for a supplementary lens to enable me to use it for projection purposes. I am anxious to do this if it be at all possible to make the corrections within the allowable limits of error, as it give an absolutely even illumination of the field, but I need a little more time and quiet to compute the curves.

Taken all in all, I think that all the different elements have been pretty well worked out. I now have to assemble them, which ought not to take long, a matter of very few weeks. I think that in a couple of weeks it will be worth while coming over, but I should glad in the meantime to show you at your convenience some of my triple threads under a microscope.

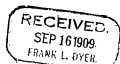
Yours very truly,

*Charles L. Brasseur*

LABORATORY OF  
CHARLES L. BRASSEUR  
116 TREMONT AVENUE  
ORANGE, N. J.

Genl. Brasseur  
Sept 15<sup>th</sup> 09.

My dear Mr Dyer.



Knowing that you would  
be anxious to hear how things  
are getting along, I herewith  
send you a short report and  
will be glad to see you at  
your convenience.

Yours very truly  
Chas L. Brasseur

13  
12

October 7th, 1909.

Mr. Edison:-

Regarding the attached circular of the Natural Color Kinematograph Company, Ltd., I beg to advise you that the scheme consists in taking pictures through successive color screens which are rotated in front of the objective, and reproduction is effected in the same way. This means that the films are two or three times as long as at present. You tried the same scheme some time ago. It is clearly impracticable, because it would mean that colored films would cost from two to three times as much as at present. While even with so expensive an arrangement as making stencils like Like, the added cost is less than 30%. Furthermore, the results are very poor. I saw one of the pictures in London, and it was not to be compared with the Pathe coloring.

F.L.D.

FLD/AMK.

Adresse Télégr: EDIPHON - PARIS  
CODE LIÈGE

USINES à:  
PARIS, BERLIN  
ORANGE, S. U. A.  
BRUXELLES

MARQUE  
**Thomas A. Edison**  
DÉPOSÉE

*Compagnie Française du Phonographe*  
**· EDISON ·**

SOCIÉTÉ ANONYME AU CAPITAL DE 100.000 FRANCS

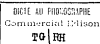
M. P. - Desbrière  
TÉLÉPHONE 277-88

PHONOGRAPHES  
RECORDS MOULÉS  
PELLICULES AUTHENTIQUES  
KINÉOSCOPES PROJECTEURS

Entrée des Marchandises

3, RUE DES MESSAGERIES

42, Rue de Paradis, 42



Frank L. DYER, Esq.,  
Vice-President,  
Edison Manufacturing Co.  
ORANGE (N.J.) U.S.A.

Dear Mr. Dyer,

Mr. Desbrière has just perfected a new picture taking apparatus which is in many points supposed to be superior to the existing cameras.

A prospectus is in preparation, but not yet printed. The only printed matter available are the enclosed two sheets of illustrations. <sup>2</sup>Also enclosed typewritten descriptions in French. I have no doubt that this information will be of interest to you.

Very truly yours,

The National Phonograph Co. Ltd.

*T. N. G.*  
General Manager.

enclo.

## NOUVEL APPAREIL DE PRISE DE VUES

$$= \frac{1}{2} = \frac{1}{2} - \frac{1}{2} = \frac{1}{2} = \frac{1}{2} = \frac{1}{2} = \frac{1}{2} = \frac{1}{2} = \frac{1}{2} =$$

VOLUME. - Cet appareil est d'un volume réduit, ce qui est un très grand avantage, puisqu'il n'est guère plus gros qu'un appareil détective 9 x 12 et environ 4 fois moins volumineux que le plus petit des appareils existants : Ses dimensions sont : hauteur 19 cm, longueur 26 cm, largeur 14 cm.

BOITES  
MAGASIN. - Ce qui a permis de faire cet appareil aussi peu volumineux ; c'est la disposition ingénieuse de ses 2 boîtes magasin, qui, au lieu d'être placées, soit l'une au-dessus de l'autre, soit à l'extérieur de l'appareil, soit fixées côte à côte à l'intérieur de l'appareil, en ménageant entre elles un espace juste nécessaire pour y loger tout le mécanisme. L'axe de la manivelle passe au travers des deux boîtes magasin (par le centre) sur cet arbre sont calées les deux frictions d'enroulement de la bande, qui elles-mêmes passent dans les moyeux de ces deux boîtes. Les boîtes magasin sont en aluminium et de forme ronde, ne tenant ainsi que la place strictement nécessaire et de poids très léger. La boîte magasin est évidée au centre ainsi que son couvercle pour permettre le logement du moyeu de bois sur lequel est enroulée et s'enroule la pellicule.

## [ENCLOSURE]

- 2 -

Le tirage de la pellicule est faite par des griffes commandé par un bouton excentrique donnant un mouvement d'avancement ne détériorant nullement la pellicule quel qu'en soit le pas.

La disposition des griffes, permet d'obtenir des images dont la séparation se place à volonté dans toutes les positions du centre du trou a entre deux trous. La pellicule est débitée par deux rouleaux débiteurs, placés un en haut à gauche l'autre en bas à droite.

Tous les organes du mécanisme sont manœuvrés de l'extérieur, tous les appareils de contrôle et d'indication de marche sont encastrés dans le bois ainsi rien ne dépasse, ce qui permet de transporter très facilement l'appareil sans gêne d'aucune sorte, et sans craindre d'abimer aucun organe extérieur.

C'est appareil est muni des derniers perfectionnements et il répond à tous les besoins de la cinématographie actuelle quel que soit le genre de vue que l'on prenne (actualité, voyage, théâtre, scènes à trucs).

L'appareil comporte : visible et accessible de l'extérieur et entièrement dissimulé :

Sur l'avant l'objectif (dont nous reparlerons plus loin) et un indicateur d'obturation lequel permet de régler l'ouverture de l'obturateur, sans rien ouvrir ou toucher à la boîte de l'appareil, il suffit pour cela de tourner un bouton (dans le sens convenable) portant deux plateaux gradués qui indiquent l'ouverture exacte et un blanc correspondant à l'angle d'ouverture donne l'obturateur.

Par ce procédé on peut très facilement ouvrir l'obturateur en grand ou le fermer complètement, chose qui nécessitait dans tous les appareils existants, l'ouverture de la boîte ce qui était toujours une manœuvre très onéreuse et une perte de temps appréciable.

## [ENCLOSURE]

- 3 -

En-dessus de l'objectif et en-dessous se trouvent placés deux boutons servant à l'ouverture de la boîte (dont nous donnerons les détails tout à l'heure). Sur la face gauche de l'appareil (vu de l'objectif) se trouve le plateau à queue d'hironde dans lequel coulisse la manivelle qui, par ce procédé se règle en longueur suivant la volonté de l'opérateur et cela instantanément.

Sur la face droite se trouve encastré le viseur, comportant des caches réglables suivant les divers objectifs.

Sur la face arrière se trouve placé de haut en bas, un mètre, muni de 2 aiguilles l'une indiquant le nombre d'images, l'autre le nombre de mètres (ou de feet), les deux aiguilles se ramènent à zéro à l'aide d'un seul bouton.

Un tube de mise au point passant entre les deux boîtes magasin.

Un poinçon de repérage perforant un trou en-dessous de l'image photographiée.

Un niveau de précision.

Un bouton de changement de marche qui permet sans rien changer sur la manivelle de faire donner à celle-ci, soit 8 images par tout soit une seule et cela en tirant simplement ce bouton.

Un indicateur de vitesse, indiquant exactement la vitesse à laquelle marche l'appareil.

Cet indicateur de vitesse est actionné par un régulateur formant volant qui régularise d'une façon parfaite la vitesse de l'appareil.

L'appareil peut indifféremment dévider la bande, soit en avant, soit en arrière, sans pour cela avoir à changer quoi que ce soit, il suffit de tourner la manivelle, soit à gauche, soit à droite, la pellicule s'enroulant automatiquement dans les deux sens.

## [ENCLOSURE]

- 4 -

L'objectif contrairement à la plupart des appareils se trouve fixé directement après la partie métallique de l'appareil au moyen de 4 colonnes. L'objectif et l'obturateur sont montés tous deux sur la même plaque qui peut à l'aide d'un seul bouton (bouton de dessus de l'objectif, sur la partie avant) pivoter pour permettre de placer librement la pellicule et de la remettre ensuite instantanément et rigoureusement à la même place.

Il est possible de monter sur cet appareil tous les objectifs existants depuis le foyer 35 jusqu'au plus grand sans délimitations.

Les objectifs sont montés à monture hélicoïdale et munis d'une pare à soleil se plaquant contre la boîte selon le désir de l'opérateur.

La boîte est en noyer verni au tampon, collé en 5 épaisseurs par un procédé spécial permettant à celle-ci de supporter la chaleur, le froid et l'humidité sans déformation d'aucune sorte.

Cette boîte contrairement à tous les appareils existants ne sert que de couverture au mécanisme, aucune pièce sauf les deux boutons d'ouverture de cette boîte ne sont fixés dessus, ce qui permet même par déformation de la boîte, de ne rien fausser dans l'appareil proprement dit.

La courroie pour tenir cet appareil à la main, placée sur le dessus, ainsi que l'écrou pour la fixation sur le pied, sont fixés à l'intérieur et sur la partie métallique de l'appareil, ne faisant ainsi nullement corps avec la boîte.

Toutes les pièces encastrées dans la boîte (objectif, niveau, mètreur, indicateur de vitesse, etc... etc...) fond joint à l'aide d'un joint ad hoc avec celle-ci.

## [ENCLOSURE]

- 5 -

L'ouverture de la boîte s'opère pour placer la pellicule, en tournant d'un quart de tour, le bouton placé au-dessous de l'objectif dans la face avant. En tournant, ce bouton ouvre quatre verrous placés à l'intérieur des colonnes et fixant très rigidement celles-ci entre elles. De cette façon la plaque de l'objectif se trouve détachée du mécanisme et permet alors seulement de faire pivoter autour de la charnière placée au-dessus de la boîte, toute la partie avant, qui entraîne dans son mouvement de rotation, l'objectif et l'obturateur, dégageant ainsi toute la partie centrale (canal et volet) permettant de placer facilement la pellicule.

En ouvrant la partie avant, celle-ci dégage automatiquement les deux parties latérales pour le libre passage des boîtes magasin.

Pour remettre l'objectif en place et refermer la boîte il suffit de rabaisser la partie avant dans sa première position et de tourner le même bouton d'un quart de tour en sens contraire. L'objectif se replaçant mathématiquement à la même place, et la commande de l'obturateur s'enchassant de même, le verrou extérieur en tournant referme les 4 verrous, qui rendent le tout parfaitement rigide.

Si l'opérateur désire vérifier la marche de son appareil, lorsque l'obturateur et l'objectif sont placés dessus il n'a qu'à tourner le bouton inférieur d'un 1/2 tour. En tournant, ce bouton, dégage la partie avant, mais seulement la partie en bois, qui de même que tout à l'heure pivote autour de sa charnière supérieure et ouvre les deux portes latérales, laissant ainsi tout le mécanisme entièrement visible et laissant l'objectif et l'obturateur dans leurs positions de travail. Pour refermer il suffit de faire l'opération contraire.

## [ENCLOSURE]

- 6 -

Pour mettre en place la pellicule on tourne le bouton supérieur pour ouvrir la partie avant avec l'objectif.

On place, la boîte magasin contenant le film vierge, sur le côté gauche de l'appareil et cela en la poussant simplement sans la fixer. On passe sur le rouleau supérieur le bout sortant de la boîte, en lui faisant ensuite décrire une boucle. Après avoir ouvert le volet, on la passe dans le canal qui est un parallélogramme et l'on referme le volet. Ensuite l'on fait décrire une boucle à la pellicule de même que celle supérieure et on la passe sur le rouleau denté inférieur; après avoir introduit la 2<sup>me</sup> boîte magasin à sa place sauf le couvercle, on rentre la pellicule à l'intérieur par le côté et on referme le couvercle. La pellicule étant mise en place, il ne reste plus qu'à fermer le devant, comme c'est indiqué plus haut. Toutes ces opérations étant faites il n'y a plus qu'à filmer.

Ce qui permet à cet appareil une marche régulière très douce, c'est le fini de sa construction.

Tous les engrenages sont à denture hélicoïdale taillée mathématiquement.

Tous les axes, tous les coussinets, sont en acier fondu, trempé et rectifié

La denture des engrenages est trempée, rendant ainsi l'usure relativement nulle, et de ce fait tout dérèglement impossible.

Les platines de l'appareil sont en maillechort toutes les autres pièces en acier dur.

Sa fabrication est très soignée, sa mise au point des plus rigoureuses.

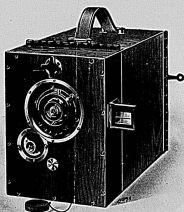
Toutes les pièces de l'appareil sont interchangeables celles-ci étant construites en séries, avec un matériel spécial



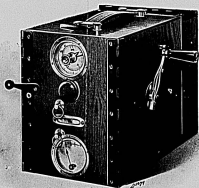
[ENCLOSURE]

Appareil de prise de vues

BREVETÉ S. G. D. G. FRANCE ET ÉTRANGER



VUE DE FACE

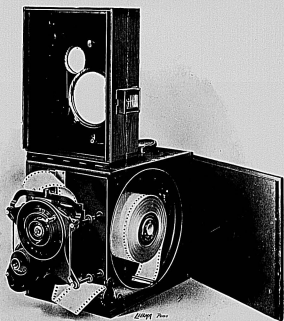


VUE ARRIÈRE

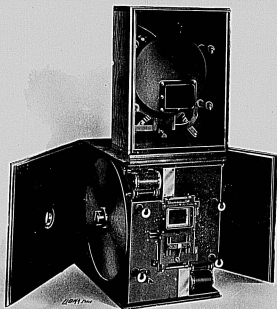


SAC

[ENCLOSURE]



VUE APPAREIL OUVERT  
FILMS ET OBJECTIF EN PLACE



VUE APPAREIL OUVERT  
OBJECTIF ENLEVÉ, AVEC LE COUVERCLE

REFER TO THIS NUMBER  
IN YOUR REPLY

988

FRANK L. DYER,  
ORANGE, N. J.

MEMORANDUM

Mr. Jameson:

11/18/09.

Regarding the Lumiere film referred to in the attached memorandum, I wish you would make a wear test of a section of this film by running it through a machine to see how it compares with the Eastman film. Also have a small section of the Lumiere film waterproofed and make a similar test of that.

FLD/IWW

F. L. D.

Enc-

*Jameson reported back  
to Mr. Dyer*

[ENCLOSURE]

November, 17th., 1909.

Mr. Dyer:-

In reference to the attached letter, regarding Lumiere non-inflammable film, I have made the test as per instructions.

Any time you care to see this film, we have it in good shape to show you.

FILM DEPT.

*Lumiere*

*W. J. Lumiere*

[ENCLOSURE]

G. FOULLEAUX  
General Manager  
A. E. BRULATOUR  
Sales Manager

PHONE 2435 MADISON

WORKS { LYONS (France)  
LUMIERE PARK  
Buckhinton, Vt.

THE LUMIERE NORTH AMERICAN CO., LTD.

LUMIERE'S DRY PLATES, FILMS, PAPERS AND CHEMICALS  
AUTOCHROM PLATES FOR PHOTOGRAPHING IN COLORS OF NATURE

LYONS (France)

NEW YORK OFFICE AND SALES ROOMS  
31-33 EAST 27TH STREET

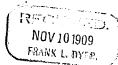
LONDON (England)

NEW YORK Nov. 9, 1909.

Mr. Dyer,

c/o The Edison Co.,

Orange, N. J.



My dear Mr. Dyer:-

I have sent you by express prepaid a roll of Lumiere non-inflammable films. I enclose you herewith a copy of instructions as to handling same. I trust that you will give them a good trial, and that you will find them satisfactory.

Yours very truly,

*A. E. Brulatour*

## [ENCLOSURE]

### DIRECTIONS FOR HANDLING NON-INFLAMMABLE FILMS

#### PERFORATION

This is done by exactly the same method as for the ordinary Inflammable Film, but it is preferable that the perforation be done from the emulsion side.

#### PRINTING

These films being thicker than the ordinary films, it is necessary that great care be observed while printing so that perfect contact with the negative film may be had.

#### DEVELOPING

The developing is done on a frame or roller with the formula mentioned below, washing and rinsing as for ordinary films. After fixing, wash in several changes of water, and observe that the time in each washing bath should not exceed 15 or 20 minutes. After these washings, submit the film to a 5% Glycerine Bath for ten minutes. The total time for developing, fixing, washing and glycerining should not exceed a half hour.

So that the films will present a pleasing aspect, and to avoid shrinkage, it is necessary that the drying process be a very slow one. It is necessary to let the film dry in the ordinary temperature of the room without setting the air in motion, so that the drying will last at least twelve hours. By observing this precaution, you will obtain a film without contraction or shrinkage.

After complete desiccation of the film, separate the collodion support from the inflammable film by winding the latter on a reel, and gently peeling from the collodion support. The slightest

[ENCLOSURE]

(2.)

Resistance experienced in this process of separation proves that the desiccation is not complete.

To each extremity of the strip of film glue a piece of paper so that the film can be duly attached to the projecting apparatus.

Keep the film in tin boxes hermetically sealed, so that they may not be influenced by atmospheric variations.

F O R M U L A

Water	1000	C.C.
Metol	5	gr.
Hydroquinone	5	gr.
Sulphite of Soda (Anhyd.)	50	gr.
Carbonate of Potash (Anhyd)	30	gr.
Bromide of Potash	1	gr.

FOR USE:

Stock Solution	30	C. C.
Water	70	C. C.

EDISON MANUFACTURING COMPANY

Dec. 6, 1909.

Mr. J. E. Brulatour,

31 E. 27th St.,

New York City.

My dear Mr. Brulatour:

In accordance with your request of November 9th we had a print made of the Lumiere non-inflammable film and it was tested, but we found its wearing qualities were very poor; in fact, the sprocket holes tore out so quickly that unless this film is materially strengthened I do not see the slightest hope for its successful use in the moving picture field.

Yours very truly,

ELD/IWW

Vice-President.



Myr

New York Dec 8/07

Dear Mr. Edison: DEC 9-1907

Not having met you personally since <sup>on</sup> one occasion about 18 years ago you will probably not remember me.

I never the less hope you can make it convenient to be present at the Natural Colour demonstration which I am giving at the Madison Square Garden Concert Hall Saturday on 9<sup>th</sup> Dec 11<sup>th</sup> when I hope to renew the acquaintance. A little deal on the subject might result in a business deal to our mutual interests.

I return to England the Wednesday following.

Faithfully Yours Oliver

Mr. Thos. Edison  
Orange N. J.

[ENCLOSURE]

"The Greatest Advance in the History of Kinematography"

# KINEMACOLOR

Urban-Smith Patents

THE WORLD IN THE TINTS OF NATURE

As Exhibited by Command Before Their Majesties

## The King and Queen of England

and now forming the principal features at the

*PALACE THEATRE, London*

*FOLIES BEGERE, Paris*

*WINTER-GARTEN, Berlin*

### Royal Society of Arts, London

Sir Henry Trueman Wood said: "A very valuable addition to the list of photographic inventions. . . . The audience must feel they were highly privileged to be present on the very first occasion that such marvelous results of patient industry and remarkable talent had been set before the public. . . ."

# [ENCLOSURE]

## RECENT PRESS APPRECIATIONS

### DAILY TELEGRAPH, London.

"An important forward movement was recorded at the Palace in the art of the Kinetograph. The date is likely to become historical; certainly the perfecting of a process which has for a considerable number of years engaged the attention of every student in the development of biologic results is one of the most beautiful and astonishingly realistic developments."

"Yesterday afternoon's performance proved, the 'Nothing' could have been more exquisite, nothing more exact in fidelity to nature, nothing more striking than these. Some followed scenes, each glowing with light, colour and animation. A field of yellow corn, bathed in the softest light of a summer evening, with youthful figures in picturesque costume following the reaping machines, stood out as a little masterpiece, while a flock of geese passed up in a meadow gave faithful impression of the original that one felt that one had only to stretch out the hand in order to touch them. All these testified by their extraordinary realism, and by the brilliancy of their tone, to the success of the new process. . . . which may confidently be relied on to attract and fascinate the public by the beauty and novelty of its presentation."

### TIMES, London.

"Here it may be emphasized that the process is a true colour photograph. . . . The reproductions are extraordinarily successful—so, for example, the shoes on a horse's legs or the varnished body of a boat, or the grey of a donkey's coat, giving by a noteworthy difficulty has to deal with in colour photography. . . . enabled the audience to realise to what extent the addition of colour enhances the effectiveness of animated photographs."

### DAILY MAIL, London.

"Surprised and delighted an audience ventured to witness them. . . . The variety of pictures exhibited showed the extent to which the process had been put. . . . Some exquisite pictures. . . . evoked loud applause. Various scenes photographed as recently as Sunday last on the French Riviera showed some wonderful colour effects, so beautifully tinted that one was not surprised to hear it claimed for this new Kinetograph that it will revolutionize motion picture displays."

### MORNING POST, London.

"And it seemed wonderful. . . . The house was crowded. . . . A great variety of scenes was shown. . . . In the twinkling of an eye it was seen that colour photography was an accomplished fact, and one excited down to wonder no more, but to enjoy the results."

### DAILY GRAPHIC, London.

"Guests were numerous enough to fill the Palace from floor to ceiling, and their enthusiastic applause was accorded to an achievement which is more remarkable than anything which has been shown here. . . . the results are amazingly successful. . . . it remains only to say that moving figures, breaking waves, motor boats, sailing boats (in one of which was seen the moving light on the keel as the boat heeled over) were all beautifully shown in vivid and approximately real colour."

### MORNING ADVERTISER, London.

"Messrs. Charles Urban and Albert Smith placed before a deeply interested audience a veritable panorama, consisting of a series of views—flowers and figures, sea and coast, marching troops and cattle, of boat-races and humorous situations, of people, single and in groups, were marvellously vivid and all unapproachably true. . . . Each picture was a masterpiece. . . . A very beautiful presentation, colour photography at its best. . . . and a more assertive spirit of animation."

"It had hardly been added that everything projected on the screen is in colour, even to the narrow to warmth and luminosity. . . . that the tone which dominates most of the pictures has a distinct tendency to yellowish tints."

### PALL MAIL GAZETTE, London.

"To capture Nature in all her beautiful colours, and to be able to present her to an audience means of the Kinetoscope is a feat which has been at last successfully accomplished, and the many who attended the Palace Theatre yesterday were unanimous in their admiration and praise of the new Kinetograph by the Urban-Smith process."

"By the new style every detail and the colour shade is perfectly presented. For instance, the march of a regiment was accurately portrayed; the uniforms and accoutrements were most realistic. The other picture showed the waves breaking on the shore, with all the natural tints of sea, country, and sky, and was one of the best shown; while the water control at Villeneuve was a most remarkable colour effects."

"A decided and advanced step was registered by this patent, and one which will revolutionize biologic presentations."

### REFRIGER, London.

"It is enough for me to say that Urban and Smith have apparently achieved the impossible. The results are indeed marvellous. Whatever the scene, there was good old Nature true to her colours at all the time. A wonderful show indeed."

### MANCHESTER DAILY GUARDIAN.

"It is curious to find Nature confiding to a machine the truth of the painter's intuition. In general, the chief effect of the new process was to give Kinetograph pictures for the first time a stereoscopic effect. Water, for which it always wove, even in the best of the old style of film, comes out really liquid and translucent."

### OBSERVER, London.

"A novel scientific invention which has revolutionized the art of the life-motion photographer, and most immensurably increase the enjoyment of his work by its admirers. . . . Seen at once to be a huge practical success."

### SPORTING LIFE, London.

"There were brought before the eyes of the audience, fresh from London's damp streets on a bitter winter's day, the West Pier at Brighton, bathed in pleasant summer sunshines, with its crowd of brightly dressed promenaders; the Brighton beach, with its animation and bustle; gay carnival scenes under the shadow of the blue sky of the South Coast; the rich beauty of the Riviera coast; trim sailing yachts, with dipping white sails; the green waters of the Channel; the sea, with its white foam, and many other scenes imbued with the glow and animation of life in many places. . . . The pictures are beautifully smooth, and there is a total absence of glare."

### TRUTH, London.

"I fancy that the new pictures of the Palace Theatre will create something in the way of a revolution in Bioscope entertainments. We have long heard about inventions which would enable these living pictures to be seen in their natural colours, but here is the real thing. . . . very marvellous. I am not going to attempt to describe how it is done, but the effects are charming. . . . In every case you have beautiful and colour, combined with a realism which is not always present in Kinetograph shows. I fancy Kinetograph will prove a very deadly rival to all other forms of living photographs."

### ABERDEEN FREE PRESS, Scotland.

"The veritable hues of Nature are reproduced with astonishing accuracy, and with a delicacy and crispness which no amount of hand-tinting by the elementary process of brush colouring could have accomplished."

### VANITY FAIR, London.

"The pictures are astonishingly beautiful, and are sure to prove a powerful attraction."

### PHOTOGRAPHIC MONTHLY, London.

"Magnificent in their brilliance, steadiness and apparent general truth to colour. . . . All were beautifully sharp and full of good detail and colour right into the shadows."

### GLASGOW RECORD, Scotland.

"An abundant success, and a remarkable advance on the artificial tinting method. . . . The effects constitute quite a new chapter in the history of the Kinetograph. . . . Some scenes with spray effects around the rocks were remarkable, and in a sailing boat scene, the glint of sunshine on the yellowish of the boat gave one a most satisfying feeling of realism. . . . Showed conclusively what a tremendous advance this is on anything hitherto known or dreamed of in the mind of the photographer."

### BRITISH JOURNAL OF PHOTOGRAPHY, London.

"As the audience at the Royal Society of Arts saw for themselves, the two-colour method proved highly capable of giving a range of colours equal to that of a three-colour process. . . . Most convincing and beautiful demonstration."

### NATURE, London.

"The results were excellent. . . . Surprisingly successful."

### ARMY AND NAVY GAZETTE, London.

"Extraordinary results. Colour Kinetographs are an accomplished fact."

### STATESMAN, Calcutta.

"Something in the nature of a revelation. . . . A notable advance, shade gradations are observed, and there is an entire lack of crudeness about the pictures."

### THORPE AND COULTY, London.

"Absolute mechanical and artistic perfection."

### SCOTLAND GOVERNMENT CHRONICLE, London.

"From an educational point of view, particularly for the teaching of Nature study and similar subjects, the moving representation of bird, animal and insect life in natural colours, Kinetography will mark a distinct advance as that which marked the advent of the ordinary moving picture itself."

### BRITISH JOURNAL OF PHOTOGRAPHY, London.

"The striking results obtained should promise a speedy commercial introduction of the system."

### LONDON OPINION.

"All the colours of Nature, from the boldest to the tenderest."

# [ENCLOSURE]

BRITISH TRADE JOURNAL, London.

"Perfectly successful. . . . The films displayed complete fidelity to natural colour, even the reds coming out true to nature."  
CHAMBER OF COMMERCE JOURNAL, London.

"Reproduced the colours of nature with extraordinary fidelity."

ILLUSTRATED LONDON NEWS.

"Crowded with success. . . . Pronounced perfect and marvellous. . . . Aroused great enthusiasm, both in London and Paris. . . . Wonderful effects."  
THE ENGLISHMAN, London.

"A wonderful demonstration. . . . The scenes exhibited were superb in their expression of tints and tones, demonstrating the fact that the process has mastered the most complex and difficult problems of colour photography. . . . A marvellous exhibition."

ENGLISH MECHANIC, London.

"The varying tints were beautifully brought out."

AMATEUR PHOTOGRAPHER, London.

"One was forced to the conclusion that the days of black-and-white cinematograph records are numbered. The pictures were quite surprisingly excellent."

INVERNESS COURIER, Scotland.

"The King's gracious comment was that the pictures were 'very good indeed.' At the conclusion of the show His Majesty warmly complimented the cinematograph colour experts on the excellence of the results attained by the new process."

BRIGHTON HERALD.

"The exhibition convinced me that when the public have become accustomed to seeing their animated pictures in natural colours, they will never be able to go back again to the photographs that are colourless."

T. P.'s WEEKLY, London.

"At once convincing and beautiful."

LE JOURNAL, Paris.

"The demonstration given yesterday with complete success is of the greatest interest for the immense majority of the public. . . . The process will entirely revolutionize the cinematograph industry."

L'ARGUS, Paris.

"We have to congratulate Mr. Smith on the masterly manner in which he has overcome so complex a problem. . . . He has entered on the path of success, and he has our best wishes for a brilliant result."

ALLEGEMEINE ZEITUNG, Berlin.

"In yesterday's exhibition we had the opportunity of convincing ourselves of the natural living efficiency of this undertaking."

LOCAL ANZEIGER, Berlin.

"Tasteful and carefully chosen subjects. . . . An enormous progress in the development of colour photography. . . . Glorious colouring, particularly successful in the sea pieces and the representation of our Carnival Procession. Received with tremendous applause."

DEUTSCHE WART, Berlin.

"Kinemacolor, as if by magic, throws the most delightful pictures upon the screen. Light and shade are beautifully presented, as well as the most delicate tints of colour."

MORGENBLATT, Berlin.

"Most beautiful colour and brilliant technique. . . . First class colour shading. . . . Colours developed themselves blamelessly."

DIE LICHTBILD-BUHN (Technician Trade Journal), Berlin.

"The continuous character of the pictures which arises from the development of both individual films, and the complete absence of the trembling movement which is attributed to the blending, leads to not feel that one is only seeing a photographic presentation of an event; but as a matter of fact, one is an actual witness."

KOENIGLICH PRIVILEGIIRTE ZEITUNG, Berlin.

"The invention shows an enormous stride in the progress of photography in natural colours."

NORD-DEUTSCHER ALLGEMEINER ZEITUNG, Berlin.

"It was fascinating to see the play of light and shade in the beautifully chosen pictures. Exceedingly successful and true to nature."

FRANKFURTER ZEITUNG.

"It was the play of light which made the colours live, and gave their worth to every shade. A living crimson."

## "KINEMACOLOR IS REVOLUTIONIZING CINEMATOGRAPHY."

The marvellous results recently exhibited in Europe will be introduced in America for the first time at the MADISON SQUARE GARDEN CONCERT HALL on SATURDAY, DECEMBER 11th, 1909, at 9 p.m.

EDISON MANUFACTURING COMPANY

1155

Dec. 10, 1909.

Mr. Charles Urban,  
Madison Square Garden,  
New York City.

Dear Mr. Urban:

Mr. Edison has referred to me your letter of the 8th inst., in reference to the demonstration which takes place tomorrow evening at the Madison Square Garden Concert Hall. He regrets that he will not be able to be present, but I shall have someone from our company on hand to witness the exhibition.

I wish you very much success, and am,

Yours very truly,

FLD/IWW

Vice-President.

REFER TO THIS NUMBER  
IN YOUR REPLY

1067

*film*  
**MEMORANDUM**

FRANK L. DYER,  
ORANGE, N. J.

797

Mr. Jamieson:

12/13/09.

I hand you herewith sample of moving picture film, unperforated, which has been submitted to us, and I wish you would have this perforated, run through a printing machine and report to me as to its photographic quality. After I get your report I will have Mr. Gall make a test for wear.

F.L.D./IWW

F. L. D.

Enc-

~~John P. P. P.~~

(12/18/09)

Edison Mfg. Co.,  
Orange, N.J.

Our representative in New York, Mr. Brulatour has advised us of the content of yours of the 6th inst, at which we are very much surprised, as we possess reports from Cinematographic houses of importance, who have passed through their apparatus our inflammable films more than 600 times without the least tearing.

Please accept etc.

~~de~~ Planchon.

Managing Director,

Film service.

ing Director,  
(The Lumiere Co.)

*[Handwritten signatures and initials]*

M.P. - Desbriere

*File  
Desbriere*

*545*

Dec. 28, 1909

Thomas Graf, Esq.,  
c/o National Phonograph Company, Ltd.,  
Willesden Junction, London, England.

My dear Sir:-

Mr. Dyer duly received yours of the 13th ult. in reference to the Desbriere camera. Mr. Dyer directs me to say that at the present time we are using cameras only for our regular work, and since the chief advantage of Mr. Desbriere's camera apparently lies in its compactness, there is apparently no particular advantage in its use. Mr. Dyer believes, however, that the time may come when we can market such a camera in this country, and he wishes to know whether an application for a patent on the camera has been filed in the United States, and if not, on what dates were applications for patents filed abroad. This latter information is to determine whether or not the camera is patentable in this country. If it is patentable, Mr. Dyer proposes that a small sum, say one thousand francs - be offered Mr. Desbriere for the United States patents, and an agreement to pay a royalty if the cameras are placed on the market.

#2

ThomasGraf , Esq.

Mr. Dyer wishes that you would furnish him the foregoing information and at the same time see whether Mr. Desbriere is likely to accept such a proposition as is outlined.

Yours very truly,

GFS/ARK.

Assistant to Vice-President.

#### **1909. Motion Pictures - Kinetophone (D-09-37)**

This folder contains correspondence and other documents relating to the technical and commercial development of talking pictures. Included are items pertaining to the experimental work contracted to Daniel Higham for a combined phonograph-projector. Other documents relate to Edison's concern about an appropriate name for Higham's "talking picture machine" (eventually called the "kinetophone") and to the evaluation of improvements submitted by outsiders. Among the correspondents are Frank L. Dyer, vice president of the Edison Manufacturing Co.; George F. Scull, assistant to the vice president; and employee Isaac W. Walker.

Approximately 70 percent of the documents have been selected. The items not selected include correspondence regarding improvements that the Edison Manufacturing Co. declined to pursue, as well as items that duplicate information in selected material.

REFER TO THIS NUMBER  
IN YOUR REPLY

334

FRANK L. DYER,  
ORANGE, N. J.

# MEMORANDUM

Mr. W. L. Eckert:

1/29/09.

The contract of Feb. 17, 1908, between the Edison Mfg. Co. and Daniel Higham provides that from the date of the first shop order put through for his apparatus his salary shall be increased from \$50.00 to \$100.00 per week. Mr. Higham called my attention to the fact that a shop order has been put through for 12 machines, and this being so he is entitled to the increase in his salary. Please arrange to have this put through, the increase taking place from the date of the shop order.

FLL/IWW

F. L. D.

Dyer

RECORDED  
MAR 4 1909  
FRANK L. DYER

MINUTES OF MEETING OF THE EXECUTIVE COMMITTEE OF THE  
EDISON MANUFACTURING COMPANY, HELD FEBRUARY 17, 1909.

Present: Messrs. Dyer, Wilson, Weber, Westee, Dolbeer,  
Stevens, McCheaney.

TALKING PICTURE MACHINE

The matter of a name for the Talking Picture Machine was discussed and several names were suggested, such as "Edisonograph", "Photophone", "Exhibition", etc. The name "Exhibition" was thought to be the most descriptive and proper and was therefore adopted.

There being no other business the meeting adjourned.

Dyer

Secretary.

A name is very important try to get a better name than this

Kinetophone would be more in keeping with our other names, before you finally decide let somebody that got a little more imagination than a mule make a list of 200

30 names = Regarding Emboral record wearing I have repeatedly asked that somebody see if there that wear were first let sent our little didn't have lampblack or if the parties who report wear don't have  
over

R  
 MAR 1 1968  
 FRANK J. DI. JR.

soft saphires - or have a bad gear or saphires  
 rides between - (W down or something) to do this but  
 I see from Committee report that he hasn't  
 done so - You better put it into COB's  
 hand & have him send a man out  
 to find out cause of trouble before we  
 change saphires etc. =

THE HISTORY OF THE UNITED STATES

The history of the United States is a story of  
 discovery and growth. It is a story of the  
 people who have lived on this continent, and  
 the people who have come to live here. It is  
 a story of the struggles and triumphs of a  
 young nation, and of the challenges it has  
 faced throughout its history.

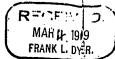
1968

The history of the United States is a story of  
 discovery and growth. It is a story of the  
 people who have lived on this continent, and  
 the people who have come to live here. It is  
 a story of the struggles and triumphs of a  
 young nation, and of the challenges it has  
 faced throughout its history.

[ATTACHMENT]

Talking Picture Machine  
Dramaphone  
Kizzetophone  
Vivophone  
phonoscope  
Photophone  
Photophonograph.

Above are a few  
suggested names



THOMAS A. EDISON,  
PRESIDENT.

FRANK L. DYER,  
VICE PRESIDENT & GENERAL COUNSEL.

*Higmanophone*

A. WESTER,  
SECRETARY & TREASURER.



**EDISON MANUFACTURING CO.**  
MAIN OFFICE AND FACTORY  
ORANGE, N. J.

**EDISON PROJECTING KINETOSCOPES AND FILMS.**

THOMAS A. EDISON.

IN REPLYING ADDRESS THE COMPANY NOT  
THE INDIVIDUAL AND MENTION THESE INITIALS.

10 FIFTH AVENUE, NEW YORK.  
304 WABASH AVENUE, CHICAGO.

CABLE ADDRESS  
"KURILIAN, NEW YORK"

dictated to the EDISON BUSINESS PHONOGRAPH

ADDRESS YOUR REPLY TO

*Orange, N. J.* Mar. 8, 1909.

Mr. Thomas A. Edison,  
Fort Myers, Fla.

My dear Mr. Edison:

*Dramaphone is descriptive  
a good - all we want to  
convey is that theatrical group*

Regarding your objection to the name "Exhibition"  
as applied to the Higman machine, I admit that the name is a pretty  
poor one, and I am glad that you have called us down. Two names  
are necessary, one for the new phonograph and the other for the  
combined apparatus. The name we had struggled with was for the  
phonograph, and I was very much in favor of some term that would  
suggest loudness, such as "Calliope" or "Thor", but I was out-voted.  
We will try it again. Of course, for the combined purpose a name  
like "Camerophone" or "Chronophone", both of which are on the market,  
would be proper. "Dramaphone" and "Vivophone", which you suggest,  
strike me as being very good, but perhaps we can find better ones.

Regarding the wearing of Amberol records, I have not seen any  
complaints recently, but I gave specific instructions that when any  
complaints were made to have the records complained of returned  
in order that we could examine them. Nothing has been said  
recently about changing the sapphire, and of course nothing will be  
done until we are absolutely sure and until you are fully advised.  
In one very recent case a man in Orange complained bitterly of the  
wearing of Amberol records, but we found upon investigation that he

T. A. Edison.

(2)

3/8/09.

was simply a crank who would probably not be satisfied with anything;  
at any rate, in that case he was entirely wrong.

Yours very truly,

*Frank L. Rice*

FLD/iww

REFER TO THIS NUMBER  
IN YOUR REPLY

449

*Mr. Edison*

# MEMORANDUM

FRANK L. DYER,  
ORANGE, N. J.

MEMBERS OF THE EXECUTIVE COMMITTEE:

3/9/09.

The name "Exhibition" selected by the Committee for the new loud-speaking phonograph, which is to be used primarily for talking pictures, has been objected to by Mr. Edison as undesirable and colorless. I wish each member of the Committee would submit to me a list of at least 10 and not more than 20 names which would be proper for a loud-speaking phonograph and let us see if we cannot get something that will meet Mr. Edison's approval.

So far as the name for the combined apparatus is concerned, we can wait a little while, but it will be well for the members of the Committee to jot down suggestions for names that occur to them.  
FLD/IWW  
F.L.D.

[ATTACHMENT]

NATIONAL PHOTODUPLICATION CO.,  
OFFICE OF THE EXECUTIVE COMMITTEE  
FRANK L. WOOD, CHAIRMAN.

Harbison Macdonald  
Ghar  
Thundersen  
Caliope  
Bepheux

[ATTACHMENT]

Grand,

Superior,

Inimitable

Gladiator

Ampliphone

Magniphone

Opera

Superaphone,

Major,

Colonel,

Czar.

Emperor,

General.

[ATTACHMENT]

COPY.

AMPHION.

The name of a Greek musician who built Thebes by the sound of his lyre which charmed the stones into their places.

ARION.

A Greek musician who charmed the dolphins with his lute.

BARD.

A minstrel poet.

CALLIOPE.

Muse of epic poetry. A series of steam whistles played by means of a keyboard. A steam organ. Beautiful voiced.

HARMONIA.

Personification of musical harmony.

HELEN.

A woman who is the center of attraction because of her beauty, accomplishments, etc.

*J. K. Dolbear*

April 17, 1909.

Mr. Dyer:-

In Re. your memo. No. 533: In Mr. Higham's contract is the following clause:-

"It is, however, understood and agreed that if the said Higham makes any invention relating to phonographs which the National Phonograph Company shall regularly adopt and put out in connection with its machines, then in such case the said Higham shall receive a salary of \$100. per week hereunder during the continuance of this agreement, irrespective of the net profits which may be made from the sale of combined moving picture and talking machines."

If the suggestion of Mr. Higham amounts to an invention, he would be entitled to this increase of salary.

Geo. F. S. 11.

GFS/ARK.

*Source -  
Let me  
know  
continued*

*Higham  
has been  
getting \$100 for  
some months  
Dyer*



May 4, 1909.

Mr. Dyer:-

In re. your memo. 568: Allowed claims in the Higham application cover broadly the idea of a feed screw mounted in a removable carriage and a fixed feed nut. The prior art discloses a fixed feed screw and a nut mounted on the movable carriage. The margin of patentability in this reversal is probably small, but the Patent Office has not cited any reference against the allowed claims. Mr. Weber's device can be made to avoid the Higham claims by making it like the prior art, though this would have to be done carefully to avoid claims in the patent to Briggs, et al. No. 876,081, dated January 26, 1897. These claims do not cover broadly the idea of a splined shaft and movable carriage, but do cover the same combination with the addition of a lever adapted when rocked to disengage the nut and at the same time raise the diaphragm needle, this lever being one of the features in the device of Mr. Weber. Mr. Weber now has a device with a rocking horn, which avoids the traveling mandrel, and he seems to think that this will be preferable to the traveling mandrel, especially in view of the Higham contract.

Since Higham has fulfilled one of the conditions of his contract, i.e., the construction of a device for talking pictures on which a shop-order has been placed, he will hereafter be entitled to a salary of at least \$3,000. a year, no matter what the profits of the Manufacturing Company are, and he will receive no more than \$5,000. a year, no matter what these profits are. Consequently, an increase of \$2,000. per annum is all that is involved in the question of the use of his device by the National Phonograph Company.

G.S.

GFS/ARK.

*Sever*

6:20

## MEMORANDUM

Mr. Schulz:

5/8/09.

Regarding the attached memorandum, keep the matter in mind, and when Mr. Weber has definitely decided on the design of the movable mandrel machine, but before he issues a definite shop order to go ahead with them, let me know and I will take up the matter with him and see just how we stand.

FLD/IWW

F. L. D.

Enc-

highnaphone  
FRANK L. DYER,  
ORANGE, N. J.

know and I will take up  
stand.

*Thomas' letter not  
in file. When 5/10/69  
Manning  
This last medicine  
accepted for  
we still not  
claiming of Highm Affair  
Houll*

[ENCLOSURE]

REFER TO THIS NUMBER  
IN YOUR REPLY

568

MEMORANDUM

FRANK L. DYER,  
ORANGE, N. J.

Mr. Scull:

4/22/09.

The contract with Mr. Higham provides that if the National Phonograph Co. shall regularly adopt and put out machines embodying his inventions Higham shall receive a salary of \$100.00 per week during the continuance of the agreement. The fact that the Edison Manufacturing Co. may use phonographs embodying Higham's invention does not in my mind bear on this question, and under the agreement his salary will depend upon the amount of business done by the Edison Manufacturing Co. If, however, the National Phonograph Co. uses these inventions, the case is different and the salary is to be \$100.00 per week, regardless of the amount of business done by the Edison Manufacturing Co. I wish, therefore,

(2)

that you would look into the movable mandrel machine which Mr. Weber has in his office and consider it in connection with the claims allowed on the Higham application and advise me whether changes can be made that will avoid these claims or whether the claims are so broad that they can probably not be avoided without sacrifice. If the latter is the case, then we might later on consider, before adopting this device by the National Co., whether we should not use a stationary mandrel after all.

FLD/IWW

F. L. D.

Enc-



BUREAU OF INVENTIONS  
Alaska-Yukon-Pacific Exposition

SEATTLE, WASH.

Opens June 1st. - Closes October 16th.

W. F. WHEELER,  
SUPERINTENDENT.

Seattle, Wash. June 24<sup>th</sup> 1909.

Mr Thomas A. Edison.  
P. Orange, N.J.

Dyer

Punk

RECEIVED.  
JUN 30 1909  
FRANK L. DYER.

Dear Mr Edison:

I enclose you a cutting which will explain itself. I am engaged here, and have can't exhibit under the Bureau of Inventions. I receive a good many applications from inventors who desire to make an exhibit of their models for the purpose of selling or promoting their inventions.

Some days ago I rec'd a letter from this Mr Goodale enquiring about exhibits, so I run up there Sunday and had an interview with him and saw his photograph, but did not hear it as it was not in order then. If he can do what he claims he certainly has got people beaten. He showed me a telegram just rec'd from some party who would stake a million of stock, but he says it's not enough. I think he will make an exhibit for the purpose of getting an award. At least I shall try and get him to do so.

I take the liberty to write you and send this clipping as you may not <sup>have</sup> seen it, but undoubtedly know of the patent from your attorneys, who keep you posted about such things. With best wishes, I am

Very Truly Yours W. F. Wheeler,

[ENCLOSURE]

THE SEATTLE DAILY TIMES, SATURDAY EVENING, JUNE 19, 1909.

## Phonograph That Records Into Continuous Film



## INVENTION PERFECTS TALKING MACHINE

Dr. F. C. Goodale of Tacoma  
Uses Celluloid Film for Re-  
producing Sound — Seeks  
to Revolutionize Business.

**A** PHONOGRAPHER that is capable of reproducing an entire opera or drama—such that with, if filed with a film roll long enough, play for more than four hours, is the invention of Dr. F. C. Goodale, a Tacoma physician, who two years ago gave up the practice of medicine to study the reproduction of sound in an effort to improve upon the present method of cylinder and disc records that will reproduce but a few minutes.

Dr. Goodale's invention is exceedingly simple in construction, and may be operated by either electrical power or spring motor. The celluloid film, which is the ordinary film used in moving pictures, and may be purchased for 25 cents per thousand feet, passes from a reel at the back of the machine, under a sapphire point connected with the diaphragm at the small end of the horn, and onto a reel at the front of the machine.

The manufacturer of a metallic cylinder sufficiently delicate to reproduce the sound waves from a celluloid film has proven the celluloid block in the path of every inventor thus far. An ordinary talking machine has a diaphragm that is perfectly flat and in the center of this and in direct contact with a needle. The Goodale machine is different. Its diaphragm is convex on both sides. It has multiple levers instead of direct, as in other machines. Three miniature levers join each other, one and being attached to the thick center of the diaphragm and the other to the miniature Goodale-shaped cylinder, which corresponds to the needle of other machines. This combination is the feature of this new invention. With this combination Dr. Goodale believes he has solved the mystery and made possible the use of celluloid film for the perfect reproduction of sound.

### Great Possibilities in New Film

On a roll of film 100 feet long and an inch in width I have successfully made sixty records, said Dr. Goodale today in describing the machine. Each record plays about fifteen minutes. The records may be made of any length, but the possibilities with a film 1,000 or more feet in length. The cost of the film is a mere item. The machine, or rotary cutter, for cutting the film into any desired width, may be purchased for about \$1,200. The rest of the machine may be made at home. The market will not be over \$25.

As an aid to the home man he would cannot be estimated. Machines that will take so many more than the ordinary gramophone. The machine may be used for correspondence with the use of a thin piece of celluloid or an inch in width and but a few feet in length, and that may be mailed for 1 cent, will prove of much value to the busy office man. The new machine operates on the same principle as the diaphragm in the incandescent vibrator where struck by the waves produced by sound. These vibrations operate a very small mouse-like knife, that in reality is tiny and nickel-finished tool, made of a little sapphire jewel. This sapphire knife cuts the thin celluloid sapphire shadow, as desired, on the celluloid passing between.

### Perfects Moving Picture Outline.

"This means the attainment of all that is desirable in the motion picture as an operated simultaneously with moving pictures as is now being done in Europe and the larger cities of this country. At the present time two machines are used in doing this. One machine is used in doing the picture, and the other, by the use of an attachment, the phonograph, reproduces the picture. The moving picture machine. This phonograph may be taken upon the talking machine record at the same time that the image and machine are recorded on the same film. Both may then be reproduced simultaneously. The new machine is now being operated by the manufacturer of the machine. The inventor is a native of Iowa, but came West eight years ago. He lives with his daughter, Mrs. F. C. Goodale, at 303 South 25th Street, Tacoma.

REFER TO THIS NUMBER  
IN YOUR REPLY

809

MEMORANDUM

FRANK L. DYER,  
GRANITE, N. H.

33

M.P. - Film-Sound

Mr. Delbeer:

5/25/09.

I have carefully considered the attached letter from Mr. Davega and the proposed talking machine invented by Dr. F. C. Goodale of Tacoma, but I do not think the suggestion is one in which we would be at all interested, since Mr. Aylsworth tells me that difficulties would be encountered in making a record on celluloid film that would be practically insurmountable.

FLD/IVW

F. L. D.

gmc-

[FROM FRANK L. DYER]

Form 230

NATIONAL PHONOGRAPH COMPANY

M.P. - Film - Sound

975

June 30, 1909.

Mr. W. F. Wheeler,  
Superintendent Bureau of Inventions,  
Alaska-Yukon-Pacific Exposition,  
Seattle, Wash.

My dear Sir:

Mr. Edison has referred to me your letter of the 24th inst., with enclosed newspaper clipping describing a new phonograph invented by Mr. F. C. Goodale. This matter had been previously brought to our attention, and after careful consideration it was concluded that the device is of no interest to us.

Yours very truly,

F.L.D./IWW

President.

Members Executive Committee:

The following are the names which have been suggested for the Talking Picture Machine. Please indicate your first, second and third choice and return to me so that I can tabulate them.

Dramaphone

Kinetophone

Vivophone

Phonoscope

Photophonograph

Musico-Dramatic

Scenescope

Depictophone

Phono-kineto

Visionphone

Talkoscope

Phonokinetograph

Motion-Picture Phono

Kinetophonograph

Graphoscope

Photophone

Projectograph

August 12, 1909.

I. W. Walker.

[ATTACHMENT]

NAMES FOR TALKING-PICTURE MACHINE

First Choice

Kinetophone	3 votes
Musico-Dramatic	1 "
Vivophone	1 "
Dramaphone	1 "
Phonoscope	1 "

Second Choice

Kinetophone	2 votes
Phonoscope	1 "
Dramaphone	1 "
Photophone	1 "
Phonokinetograph	1 "
Talkoscope	1 "

Third Choice

Photophone	2 votes
Kinetophone	1 "
Phonoscope	1 "
Kinetophonograph	1 "
Visionphone	1 "

Total

Kinetophone	6 votes
Phonoscope	3 "
Photophone	3 "
Dramaphone	2 "

*Higham Phonograph* 1030

Members Executive Committee.

The following names have been suggested for the Higham  
 Loud-Speaking Phonograph. Please indicate your first, second and  
 third choice and return to me to be tabulated:

Thor	Sonic	Cryptophone
Thunderer	Vox Magna	Cryptophone
Calliope	Perfection	Choralophone
Royal	Wander	Charister
Emperor	Glory	Salon
Monarch	Faithful	Cabinetta
Amphion	Beauty	Magna
Orpheus	Delightful	Mystic
Nestor	Unique	Climax
Magnus	Chorus	Symfon
Slogan	Society	Advance
Stentor	Grand	Famous
Jupiter	Superba	Progress
Alma	Invincible	Popular
Eureka	Gladator	
Winner	Ampliphone	
Special	Magniphone	
Tiptop	Opera	
Champion	Operaphone	
Napoco	Major	
De Lux	Colonel	
Star	Czar	
Overall	General	
Leader	Regent	
Sanapareil	Regal	
Sonola	Crown	
Arion	Orphean	
Peerless	Bard	
Edisona	Harmonia	
Edisonia	Bells	
Director	Harmony	
Favorite	Merriment	
Nonpareil	Soprano	
Clarion	Euphonion	
Heroular	Dulcetophone	
Iroquois	Uranophone	
Ambassador	Cabinet Grand	

August 12, 1909.

I. W. Walker.

Members Executive Committee.

The following names have been suggested for the Hornless Phonograph. Please indicate your first, second and third choice and return to me to be tabulated:

Opera	Melodic
Sonola	Edisona
Magic	Edisania
Mystic	Amphion
Famous	Orpheus
Attractive	Dulcetone
Select	Nector
Progress	Magnus
Accurate	Stogan
Concise	Stantor
Special	Jupiter
Complete	Aome
Popular	Eureka
Horn	Winner
Superba	Special
Magna	Tiptop
Majestic	Champion
Climax	Napoco
Symfon	De Lux
Advance	Star
Salon	Overall
Cabinetta	Leader
Nonpareil	Sanspareil
Iroquois	Arion
Ambassador	Bard
Sonido	Harmonia
Vox Magna	Belle
Perfection	Regent
Perfect	Regal
Harmony	Crown
Wonder	Orphean
Glory	Euphonia
Faithful	Dulcetophone
Beauty	Uranophone
Delightful	Cabinet Grand
Unique	Cryptophone
Merriment	Choralophone
Soprano	Chorister
Favorite	
Chorus	
Society	
Grand	
Operaphone	
Royal	
Emperor	
Symphony	
Orchestral	
Symphonic	
Monarch	
Symphonic	

I. W. Walker

August 12, 1909.

MELVILLE CHURCH,  
J. H. CHURCH,  
A. B. STEUART,

PATENT CAUSES.

LAW OFFICES OF  
CHURCH & CHURCH,  
MCGILL BUILDING,  
808 G STREET N. W.

LONG DISTANCE TELEPHONE  
MAIN 2145.

CABLE ADDRESS "CHURCH."  
A. B. C. CODE USED.

WASHINGTON, D. C. September 15, 1909.

Frank L. Dyer, Esq.,

Orange, N. J.

Dear Mr. Dyer:-

I have come across an application, filed in 1880, now pending in the Patent Office, which contains fundamental ideas and basic claims in arts which I think may make it of material value to one or more of your companies. Spencer B. Prentiss, whom I have known for years, is attorney in the case and has brought it to me for advice and with a view to submitting it for sale.

The invention consists in recording and re-producing sound and other phenomena by means of light (and other radiant energy), and a ribbon-like translucent photographic film. This film is wound on reels and moved at the proper speed to receive the impressions, which latter are made by light controlled by a shutter carried by a diaphragm which vibrates in accordance with the sound to be recorded. Reproduction of the sound is effected by projecting light through the translucent photographic record upon a sensitive receiving device, such as a selenium cell, included in circuit with a telephone receiver.

Frank L. Dyer, Esq., --2

Very broad claims stand allowed on the apparatus and combination of elements, and also on the record strip. Claim 50 reads as follows:-

"50. A record of pulsations in sound consisting of a strip or band photographically affected in accordance with said pulsations and capable of reproducing the sound."

Many elaborations and modifications of the broad idea are described upon which divisional applications could doubtless be prepared.

You will, at once, see the bearing of this case on the phonograph and moving picture arts and the possibility that dominating claims might be obtained which could be used offensively and defensively. The early filing date, 1880, makes the finding of pertinent references practically impossible.

If you would like to look into the matter and will appoint a time for an interview to hear the application read, Mr. Prentiss will go to New York for that purpose, or I will bring the application over to you. Two hours would, probably, be required to dispose of the matter.

Frank L. Dyer, Esq., --3.

The application has been submitted to me with the understanding that if it is not purchased no disclosure will be made to any other person and no act done to injure or prejudice the application.

I know of no one so competent as yourself to pass upon the probable value of the application.

Yours very truly,

PT

A handwritten signature in cursive script, appearing to read "Melville Churchill". The signature is written in dark ink and is positioned below the typed name.

Sept. 16, 1909.

Melville Church, Esq.,  
908 - G Street,  
Washington, D.C.

My dear Mr. Church:-

Yours of the 15th inst. has been received in reference to the application of Mr. Prentiss. If the application is limited to the recording of sounds or similar phenomena by means of light, it would be of interest to us, but if the claims are broad enough, in your opinion, to cover moving pictures, it might be very interesting, although we must not forget that broadly speaking, the moving picture idea was suggesting many years before 1880. At the same time, there would certainly be no harm in my looking into the application providing Mr. Prentiss has not some impossible idea as to its value, and I would suggest that you bring it over. There are always enough things here to be discussed with you as to make it worth your while to come on whenever you can. Almost any day next week would be convenient to me except Tuesday and Thursday, when, as you know, I am in New York.

Yours very truly,

President.

BHS/ARK.

MELVILLE CHURCH.  
A. B. CHURCH.  
—  
A. B. STEUART.

LAW OFFICES OF  
CHURCH & CHURCH,  
McGILL BUILDING,  
908 G STREET N.W.

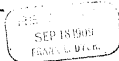
PATENT CAUSES.

LONG DISTANCE TELEPHONE  
MAIN 3148.

CABLE ADDRESS "CHURCH."  
A. B. C. CODE USED.

WASHINGTON, D. C. September 17, 1909

51  
Frank L. Dyer, Esq.,  
Edison Laboratory,  
Orange, N. J.



Dear Mr. Dyer:-

Yours of the 16th instant received.

I will come over to New York Sunday night and be at your office in Orange on Monday morning. Will bring the application controlled by Mr. Prentiss with me and you can then decide whether there is anything in it worth while. I make this early appointment in order that it may not conflict with later ones. I hope it will be agreeable to you.

Truly yours,

PT

*Melville Church*

*Waelder -  
have acknowledgment  
Dyer*

721  
M.P. - Patent

October 13, 1909.

Mr. Dyer:-

In accordance with your instructions, I took up the matter of making the model of the Baldwin sound amplifier, shown in the accompanying patent, with Mr. Pierman. The latter said that he was very busy on some work for Mr. Edison and suggested that Wolke was capable of doing the job, and as Pierman expressed it, would be free from any prejudice. Mr. Wolke, however, is doing some work for Mr. Edison also, and I thought it would be advisable for you to take up the matter with Mr. Edison to have him authorize Wolke to do the job.

G.F.S.

GFB/ARK.

EDISON MANUFACTURING COMPANY

Nov. 12, 1909.

Mr. Horace G. Plimpton,  
Bronx Studio.

Dear Sir:

Mr. Hughes is anxious to obtain a camera in first-class condition in order that he can now start in to take commercial talking pictures. Please advise me how you are situated on the subject of cameras and whether you can spare one at the present time. Also ascertain from Mr. Oliver and advise me how many cameras, if any, are now being finished up in the factory and when they will be completed.

Yours very truly,

FID/IWW

Vice-President.

THOMAS A. EDISON,  
PRESIDENT.

FRANK L. DYER,  
VICE-PRESIDENT & SENIOR COUNSEL.

C. H. WILSON,  
GENERAL MANAGER.

A. WESTEE,  
SECRETARY & TREASURER.



TRADE MARK  
Edison

## EDISON MANUFACTURING CO.

MAIN OFFICE AND FACTORY  
ORANGE, N. J.

### EDISON PROJECTING KINETOSCOPES AND FILMS.

10 FIFTH AVENUE, NEW YORK  
304 WABASH AVENUE, CHICAGO.

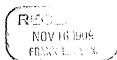
CABLE ADDRESS  
"KURILIAN, NEW YORK"

IN REPLYING ADDRESS THE COMPANY NOT  
THE INDIVIDUAL AND MENTION THESE INITIALS.

ADDRESS YOUR REPLY TO EDISON STUDIO, 3886 DECATUR AVE., BEDFORD PARK

*New York.* Nov. 15, 1909.

Mr. Frank L. Dyer, Vice-President,  
Edison Manufacturing Co.,  
Orange, N. J.



Dear Sir:-

Referring to your letter of the 12th about cameras,  
the way the matter stands at present is as follows:-

We have eight cameras of which five are in use by our  
regular Camera Operators, and one in the possession of Mr. Chester.  
This leaves two cameras to provide for the camera to be used to re-  
place the one turned in each week by the Camera Operator, and one  
other in case of any breakdown, necessitating repairs at Orange.  
If we should take one of the above cameras for Mr. Higham, you  
will see that it will only leave one camera beyond the amount in  
daily use, and we should hardly be on the safe side.

I understand that the camera Mr. Porter took West is now  
in Mr. Weber's hands some small parts being missing. Mr. Oliver  
is to see Mr. Weber to-morrow, and if this camera can be put into  
shape immediately, we can then be able to give Mr. Higham one,  
without any loss to the regular business. I will advise you about  
this to-morrow or Wednesday.

- 2 -

In addition to the above, there are four more cameras being built, one of which I understand is expected to be ready in about five weeks, and the others, I presume in two or three months.

Referring to your letter of the 12th in regard to lengths of special pictures, this will have attention.

Yours very truly,

Edison Manufacturing Co.,

Kinetograph Dept.,

*Mr. A. C. Thompson*

Mgr., Negative Production.

RE/BB

EDISON MANUFACTURING COMPANY

*749maphone*

835

Nov. 16, 1909.

Mr. Horace G. Plimpton,  
Bronx Studio.

Dear Sir:

Replying to yours of the 15th inst., let me know as soon as the Porter camera is fixed up in order that one of the other cameras can be turned over to Mr. Higham. I have urged Mr. Weber to-day to push the construction of the four additional cameras as rapidly as possible.

Yours very truly,

FLD/IWW

Vice-President.

278

~~521~~  
Memo.

Higham  
(12/1/19)

See Mr. Plimpton tonight and tell him that Mr. Higham is now ready to take pictures. These pictures will be taken at the 21st St. Studio and Mr. Higham will be given the use of the Studio as much as he wants, provided he gives Mr. Plimpton two or three days notice beforehand. Also have Mr. Haddock co-operate with Mr. Higham in picking out desirable records to be illustrated by means of pictures. Mr. Haddock can be of great help to Mr. Higham in connection with the making of the pictures. Mr. Higham will also have the use of Mr. Haddock's camera man when the pictures are being taken; in other words, until Mr. Higham makes a sufficient number of pictures for stock, he will have the right of way at the 21st St. Studio.

Mr. Higham proposes to start in at 21st St. on Friday morning if convenient to Mr. Plimpton; if not, Mr. Plimpton will telephone Mr. Higham tomorrow.

12/1/09.

F. L. D.

#### **1909. Patents (D-09-39)**

This folder contains correspondence and other documents relating to foreign and domestic patent applications, patent litigation, and other patent matters. Among the items for 1909 are letters concerning patent legislation in the United States and Great Britain, patent jurisdiction in the Panama Canal Zone, and the possible commercial exploitation of two Edison patents. Most of the letters are to or from Frank L. Dyer, president and general counsel of the National Phonograph Co.

Approximately 40 percent of the documents have been selected. The items not selected include routine letters of inquiry; receipts; Edison patents enclosed with selected correspondence; routine letters concerning taxes; accounts with attorneys; and items that duplicate information in selected material.

Related documents can be found in D-09-32 (Legal Department).

Feb. 10, 1909.

Charles P. Brush, Esq.,

Postal Telegraph-Cable Co.,

253 Broadway, New York.

My dear Sir:

Mr. Edison has suggested that I should bring to your attention the enclosed patent, No. 909,877, dated January 19, 1909. He would like to have you read this patent over and advise me whether or not you think the invention is one in which the Postal Telegraph Co. would be interested. He states that his experiments with the invention have turned out very satisfactorily and he regards the scheme as entirely commercial. Should you desire extra copies of this patent I will be glad to let you have them.

Yours very truly,

WLD/IWW

General Counsel.

Enc-

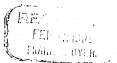
Postal Telegraph-Cable Company  
Executive Offices

CHARLES P. BRUCH  
THIRD VICE PRESIDENT

253 BROADWAY

New York February 11th, 1909

Mr. Frank L. Dyer,  
General Counsel,  
Thomas A. Edison,  
Orange, N. J.



Dear Sir:

Your favor of the 10th instant, enclosing a copy of Mr. Edison's patent No. 909,877, of January 19th, 1909, has been received and referred to our Electrical Engineer, with the request that he examine it and report as to whether or not the device is likely to be adaptable to, and of use in, our service. Upon receipt of this report, I will communicate with you further.

Thanking Mr. Edison and yourself for bringing the matter to our attention, I am,

Yours truly,

*Charles P. Bruch*  
Vice President.

*Edison*

*Patents*  
NATIONAL PHONOGRAPH COMPANY

774

Feb. 23, 1909.

Joseph R. Edison, Esq.,  
Washington Life & Trust Building,  
Washington, D. C.

My dear Mr. Edison:

I thank you very much for your letter of the 17th inst., enclosing the proposed Patent Court of Appeals bill. It seems to me that this is a most excellent suggestion and one that cannot help from doing much good.

I know Mr. Edison's ideas, as I have often discussed this matter with him, and the suggestion meets with his emphatic and hearty approval. You know, of course, that in past years he has criticised our patent system in various ways, largely because of the discouraging delays and difficulties which are encountered in having cases finally disposed of, and I believe the new Court would in a large measure remove these objections.

Thanking you for your very kind personal words, I am,

Yours very truly,

ELD/IWW

President.

JOSEPH B. EDSON

ESTABLISHED 1860

GEORGE A. HUTCHINSON

EDSON BROTHERS  
ATTORNEYS AT LAW AND SOLICITORS OF PATENTS  
PATENT AND TRADE-MARK LITIGATION  
WASHINGTON LEAS & TRUST BUILDING  
WASHINGTON, D. C.

March 6, 1909.

Frank L. Tyer, Esq., President, etc.,  
Orange,  
New Jersey.



My dear Mr. Tyer:-

I thank you for yours of the 23rd ult. Although the Committee on the Judiciary made a favorable report on our Patent Court of Appeals bill, following a similar report of the Committee on Patents, owing to the short session and the amount of work before the House, we were unable to secure the passage of the Bill at this session. We feel confident of favorable action by Congress at its next general session. May I, as a representative of the Committee on Patents, etc., expect some assistance from Mr. Edison in support of this said Bill, especially in the Senate. I will be glad to send you, or Prof. Edison, any literature at my command which would tend to further secure his co-operation in support of the Bill.

Very truly yours,

*Joseph R. Edison*

REFER TO THIS NUMBER  
IN YOUR REPLY

450

MEMORANDUM

*patent*  
FRANK L. DYER,  
GRANOR, N. &

Mr. Holden:

I hand you herewith letter of Feb. 23rd, from Harris & Mills, which has disturbed me a good deal. I have always understood that under the new British Patents Act working in Great Britain was compulsory only when a demand existed in that country for the patented article, and when that demand was supplied by importation into Great Britain from a foreign country--in other words, while the battery was still in a more or less formative state, we would be fairly safe so long as we did not supply British customers from America or Germany. Harris & Mills seem to feel that this is not so and that we ought to commence manufacturing in Great Britain immediately. If they are right, I am afraid the advice I have given Mr. Edison may not be correct. I wish you would look into this matter immediately so far as possible and advise me. You will find that I have had some correspondence with Mr. Marks on this subject, and possibly his letters may be helpful.

FLD/IWW  
Enc-

F. L. D.

[FROM DELOS HOLDEN]

*Patents*

April 8, 1909

1096

*File  
Patent  
of Patents*

Mr. Dyer:

I have gone over the decisions sent by Harris & Mills, regarding the working of British patents under the new law. I do not find any case in which it appears that there had been no importation whatever of the patented articles into Great Britain, and in which the application for revocation was opposed on this ground.

I should not, however, consider it a valid defence, or in case there had been manufacture outside Great Britain, because the British law provides for revocation in case the patented article is manufactured exclusively or mainly outside the United Kingdom.

If the article is manufactured at all outside of Great Britain, then it is covered by the "exclusively" provision, whether it is imported into Great Britain or not.

Some patentees have endeavored to save their patents by showing that the article was manufactured in Great Britain as well as abroad, but where the number of articles imported exceeded the number of articles made in Great Britain, the Controller has held that the article was manufactured mainly outside of Great Britain and he therefore revoked the patent.

It seems that the only way to avoid revocation is not only to manufacture in Great Britain but to make more of the articles there, that is, a greater number of the articles there than are imported into Great Britain.

In an application for revocation granted in February last, the argument was made for the patentees that there had been no manufacture any where of the patented article, but this argument was based upon a fanciful interpretation of the words "patented articles", the patentee claiming those words to mean an article for which protection is claimed by the patentee, and that if the patentee does not label the articles as being made under the patent, he is not claiming a protection under the patent and is not using the patent. This view is not taken by the Controller who held that what is a patented article depends upon the specification and claims of the patent, which seems to be the true view. In this case it appeared that the patented device was made in Great Britain only to a small extent and there were large importations, and there were also a great many infringing lamps made in Great Britain. The Controller held that even if 60 per cent of the lamps that were sold in Great Britain were there manufactured and the remainder imported, this would not go to show that the patented article was not manufactured mainly abroad, because it would leave altogether out of account the number of lamps which are made abroad and not imported into Great Britain. I do not see how the court could sustain any such proposition as this, because this principle the supplying of all the British demands with goods of British manufacture would not save the patent in case such demand was smaller in comparison with the demand in foreign countries

supplied by manufacture in such countries.

However, from reading the decision in this and other cases, I am of the opinion that the only way to save British patents which are being worked at all in foreign countries, is to supply the entire British market, or at least more than 50% of it, with articles manufactured in Great Britain, and that such manufacture means the making of the several parts there as distinguished from the importing of the parts and the assembling of them in Great Britain.

DR/MLL

*patents*

Postal Telegraph-Cable Company

Executive Offices

253 BROADWAY

New York

CHARLES F. BRUCH  
THIRD VICE PRESIDENT

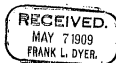
May 6th, 1909.

919

Mr. Frank L. Dyer,

General Counsel,  
Edison Laboratory,

Orange, N.J.



Dear Sir:

Referring to your letters of February 10th and April 7th: My delay in replying has been due to absence on account of illness.

On my return to the office a day or two since, I find a report from our Electrical Engineers to the effect that, in their opinion, the improvement likely to result from the application of rectifiers to our quadruplexes would hardly be sufficient to warrant their adoption.

However, if you desire us to give them a practical trial, and will send us the necessary apparatus for that purpose, we will be glad to make the trial, and advise you as to the result.

Yours truly,

*Charles F. Bruch*

Vice President.

*Edison*

*Walter*

CPB-MV

REFER TO THIS NUMBER  
IN YOUR REPLY

689

MEMORANDUM

*patent*  
FRANK L. DYER,  
CHARGE, N. J.

Mr. Holden:

5/22/09.

I call your attention to the attached reissued patent to Miller, No. 12,963, dated May 25, 1909. Running over the claims hastily gives me the impression that the Victor Company have broadened the original patent to a tremendous extent. I wish you would make as soon as possible a preliminary report on the claims of this patent, and later on I will have you make a final report, because I am afraid this patent may cause trouble. I have requested Bacon & Milans to send immediately a report on the File Wrapper of this patent.

FLD/IWW

F. L. D.

REFER TO THIS NUMBER  
IN YOUR REPLY

834

MEMORANDUM

*Glass - make card*  
FRANK L. DYER,  
CHARGE, N. J.

Mr. Dyer Smith:

473  
7/6/09.

You will find that about 23 years ago, as I remember, Mr. Edison obtained two or three patents relating to the manufacture of plate glass by squirting the liquid glass through a die, and these patents were assigned to a number of individuals. After you have found these patents, bring them to the attention of Mr. Harry P. Miller and see if he can locate any contracts relating to their use. Mr. Edison tells me that this process is now being extensively employed in Ohio and he thinks there was a contract under which he was to be paid royalties. I want to look into the matter and see if there is anything coming to him.

FLD/IWW

F. L. D.

REFER TO THIS NUMBER  
IN YOUR REPLY

1085

MEMORANDUM

*see mailing*  
FRANK J. DYER,  
ORANGE, N. J.

Mr. Dyer Smith:

12/20/09.

There is some possibility that the Government may put in an infringing Giant Roll Crusher in the Canal Zone. Look up the patent question and see if it is necessary for us to register our patents in the Canal Zone in order to give protection.

FLD/IWW

F. L. D. *fld*

*Ward*

Dec. 20, 1909

Mr. Dyer:

In answer to your memorandum 1085 referring to the possibility of the Government putting in an infringing Giant Roll Crusher in the Canal Zone, I would say that the patent, trade mark and copyright laws of the United States were extended to and made effective within the Canal Zone to the extent that any patent or copyright issued under the laws of the United States, or any trade mark duly registered in the Patent Office shall vest in the person to whom it is issued or in whose name registered, his assigns and licensees, subject to the protection of the Circuit and Supreme Courts of the Canal Zone, the same exclusive right of property therein that such person would possess in the United States. This was done by executive order by authority of the President and signed by Secretary Taft to become effective April 15, 1907. Apparently, we have as much protection against the Government under our patents in the Canal Zone as we have anywhere in the United States. It seems to me, however, that this is not a great deal of protection. If they infringe or threaten to infringe, we might perhaps enjoin some of the officers of the Government from infringing further, but I do not think we could ever get any accounting or any relief except an order preventing the Govern-

#2

ment from using the apparatus. The only way we can make anything out of the Government's desire to use the rolls in the Zone, if they do so desire, would seem to be to meet them partway and make some arrangement which the Government would accept.

D. S.

*Dyer Smith*

JS

Stock ticker

Mr. J. C. Edison

Aus 13/10 Edgerton, C. 11/27/04

Orange, N. J. Say that I am

Dear Sir: - \$40,000 for some

I am interested in <sup>inventions in print</sup> ~~inventions in print~~

as high I am trying to get ~~it to the~~ <sup>it to the</sup>

you can see by reading the ~~other side~~ <sup>other side</sup>

the matter about you, I would consider

to a favor if you will give me the

facts in the case. Not for any particu-

lar concern to me, only as a matter of

interest of other investors. The invest-

or of your own question mentioned in

the report on a telegraph instrument

The story of the report stated that the

president of the Telegraph Co. offered

you \$36,000 for your invention. Trust-

ing to hear from you at an early date,

I beg to remain,

Yours resp,

Selwyn Barker

at  
enclosure





Nov. 19th, 1909.

Mr. Selwyn Aucker,  
Edgerton, Ohio.

Dear Sir:-

We have received yours of Nov. 15th, and shall be pleased to receive your instructions together with the first fee of \$10. at your earliest convenience.

If you do not hear from the party to whom you wrote relative to us, please let us know at once, giving us his name if you have no objections to doing so. There is of course a chance that some of these inventors have moved or that they would not have time to answer inquiries relating to us, and should you fail to get a reply to your letter, we would suggest that you write to others. We believe that Mr. J. F. Willey, of Versailles, Ill., can give you an opinion as to our ability, and also Mr. H. H. Dickson, of Orlando, Fla.

We note your statement that you contemplate writing to Mr. Thomas A. Edison for verification of the statement that he received \$36,000. for his first invention. Please bear in mind, however, that we do not vouch for the statement that Mr. Edison received \$36,000. for his invention. The account of this occurrence appeared in an article re-

*Have note to J. F. Willey  
As to whether the statement is correct or not*

#### **1909. Phonograph - General (D-09-40)**

This folder contains correspondence and other documents relating to the technical and commercial development of phonographs. Among the documents for 1909 are items pertaining to the process of making cylinder records and to plans for developing diamond reproducing points and disc phonographs. Also included are letters suggesting new applications or improvements for the phonograph, to which Edison responded with marginal comments. Among the correspondents are Edison; Harry F. Miller, his personal secretary; Frank L. Dyer, president of the National Phonograph Co.; George F. Scull, assistant to the president; Carl F. Wilson, general manager; and Alphons Westee, secretary and treasurer.

Approximately 90 percent of the documents have been selected. The items not selected include letters of transmittal and acknowledgment and items that duplicate information in selected material.

REFER TO THIS NUMBER  
IN YOUR REPLY

234

*Germany*  
**MEMORANDUM**

FRANK L. DYER,  
CHARGE, N. J.

Mr. Westee:

1/8/09.

I hand you herewith trial balances of the English, French and German Companies for the months of September and October, 1908, just received from Mr. Graf. Please let me have a brief report as to what these show so that I can submit the same to Mr. Edison and give him an idea of what the Foreign Companies were doing during those months.

FLD/IWW

F. L. D.

Enc-

Phone  
TAE.

"Sturmont"  
Worcester, Massachusetts.

Ans 1/15/09

Jan. 12, 1909.

Dear Sir,-

The enclosed correspondence will explain it  
-self. Can you suggest anything to help me  
out in this matter?

Kindly return the correspondence I have  
enclosed with this letter, and oblige

Yours very truly,

Ralph H. Sturmont

Mr. Thos. A. Edison,

East Orange, N. J.

Return saying that I have  
seen persons who could repeat  
into the phone in a how time  
as fast as the person speaking  
could talk - did you ever  
try it - E

REFER TO THIS NUMBER  
IN YOUR REPLY

262

*Phon. - Patents*

FRANK L. DYER,  
ORANGE, N. J.

MEMORANDUM

Mr. Harry P. Miller:

334

1/16/09.

I hand you herewith letter from Mr. Aylsworth asking for an additional advance on the amount to be paid him for his patents when the Amberol record was successful, also a note from Mr. Edison explaining his present understanding of the arrangement. I think you had better keep these for future reference, in case the question ever comes up again. Mr. Edison has endorsed on Mr. Aylsworth's letter a note to pay him an additional \$5,000.00 on account of the patents, and I wish you would make arrangements with Mr. Edison to have this done. The money will be paid by the New Jersey Patent Co.

F. L. D.

Enc-

*Motion Pictures*

721

Feb. 25, 1909.

Frank L. Dyer, Esq.,  
c/o Marlborough-Blenheim,  
Atlantic City, N.J.

My dear Mr. Dyer:-

I have the honor to report that Mr.

Aylsworth has already put into practice the vacuum method of withdrawing records from the molds. He believes that it is a thoroughly practicable commercial operation. This is being done, however, without the polygonal cores, but he is working on these cores, although he does not believe that it is practical commercially to use them.

Yours very truly,

GFS/ARK.

E. A. C. Co.

RECORDED:  
8 to 11 A. M.  
7 to 8 P. M.

Smy Dr. J. C. DaCosta, JR.,  
1022 SPRING STREET,  
PHILADELPHIA.

#4

Am 3/17/09

LOCAL AND LONG DISTANCE  
TELEPHONE

It is not practicable in the present state  
of the art to record heart sounds by  
phonograph. 189-10-13  
OVER heart

Thomas A. Edison,  
Orange, N. J.

Dear Mr. Edison:-

I am writing to enquire whether it is practicable to record by the phonograph the various sounds of the heart and of the lungs; to magnify these sounds so as to render them audible in a lecture-room; and to use such records for teaching purposes, to illustrate to medical students the various types of cardiac and respiratory findings obtained by means of auscultation with the stethoscope. The sounds to be recorded, though not intense, are fairly clean-cut and of a comparatively simple character; they can be readily magnified, with an amplifying stethoscope (phonendoscope) before their direct transmission to the blank record of the phonograph.


If you regard this scheme as feasible, I am anxious to undertake the recording of a series of both normal and pathologic sounds of the nature above specified, and will be grateful to you for any advice you may care to offer as to the technic of so doing.

With thanks in advance for your trouble in this matter,

Very truly yours,

J. C. DaCosta, Jr.

[ON BACK OF PRECEDING PAGE]

~~anybody~~ Has anybody ever tried putting an exceedingly  
fine platinum needle, one into the artery the other in the  
vein & record the variation of <sup>pressure</sup> ~~resistance~~ at the  
heart valves or whatever separates the two momentarily.  
I think there would be a big change of <sup>pressure</sup> ~~resistance~~  
and very weak current could be used. <sup>varying</sup> ~~the current~~  
could be broken up by an ~~oscillator~~ vibrator & you would  
get a varying musical note in the telephone.  
I am ignorant of a <sup>platinum</sup> 3/1000 platinum needle would produce  
injury by puncture — 

hab. vis dors

## STONE CITY BLUE PRINT CO.,

ELECTRIC PRINTING PROCESS.

Drawings Made for All Kinds of Work.

Work Promptly Done and Guaranteed.

BEDFORD, IND.

2 - 8 09

Mr H F Miller

Dear Sir

I arrived home all right. although mighty tired. I am rested up slightly now after a few quiet days with Fighting Bob. I have the picture you gave me in a nice frame. people here are very much surprised to see a great plant. I tell them that it is worth their expenses there and back to see where the best Photograph in the world is made. since I returned I have almost been driven mad with news reporters and company. as soon as mr Loyer returns I hope they will see fit to close a deal at once as I am getting anxious to get my new machine give my respects to mrs Welber and Petit.

Very Respectfully

Wm Brown  
Bedford Ind

REFER TO THIS NUMBER  
IN YOUR REPLY

530

*legal*  
**MEMORANDUM**

FRANK L. DYER,  
ORANGE, N. J.

87

Mr. Wm. Pelzer:

4/9/09.

Now that the New York situation has been closed up, I think we ought to get right to work against price-cutters in that State to prevent the disease from spreading. I recollect that there was one particularly irritating case in the Bronx. I suggest that you take up this matter immediately with Mr. Dyke or Mr. Holden in order that a number of suits can be brought.

FLD/IWW

F. L. D.

REFER TO THIS NUMBER  
IN YOUR REPLY

713

*Germany*  
**MEMORANDUM**

FRANK L. DYER,  
ORANGE, N. J.

Mr. Buchler:

6/1/09.

I hand you herewith letter from Mr. Graf of March 26th, reporting on the German business, and before discussing the matter with Mr. Wilson I would like to have your views as to any point you consider of interest. If the German factory was able to make records cheaper than we can sell them for when made at Orange, and if the German sales office lost money, I do not see very much hope of the business being profitable unless some change for the better takes place. Still, Mr. Graf seems to feel that by moving the offices to the Central part of Berlin there will be better opportunity for the Sales Department. You are more familiar with this situation than I am and I wish you would write me a brief report so that I may have it Wednesday morning, giving me your views as to the situation.

FLD/IWW  
Enc-

F. L. D.

Phono -  
Plate

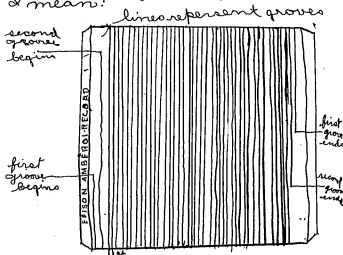
Say that this,  
Edison has been found  
tried but you ~~had~~ <sup>no</sup>  
~~some~~ <sup>the</sup> ~~idea~~ <sup>over</sup>  
Mr. Thomas A. Edison <sup>will</sup>  
use <sup>the</sup> ~~amberol~~ <sup>idea</sup>

Dear Sir -

Suppose you <sup>are</sup> ~~are~~  
aware of the fact that many  
of the disc phonograph record  
Manufacturers are placing a  
record on each side of the record  
plate.

Since you are ~~the~~ manufacturing  
your Edison Amberol record  
you are manufacturing a record  
that plays four minutes  
I have a plan by which I think  
if completed will play two  
standard size records on one  
of your amberol records.

I will here give a diagram  
by which you may see what  
I mean:



outside surface of your Edison Amberol  
Record.

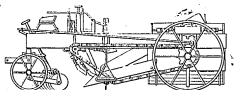
You will see here that I  
have two continuous lines  
of grooves now on each one  
of these lines you can record  
a two minute record and  
having two grooves you will

have<sup>2.</sup> space to record two two minute records, thus giving the purchaser two records on one. The only extra fixtures needed to play these records on the common phonograph will be the regular needle used on your amberol records. The feeder as you will understand will not need to be changed. as you understand the composition of records and I do not will give you this information and if you can see it it will be yours. If there is any thing you do not understand because of my poor way of explaining please write me and I will try to make it fuller. yours.

M<sup>r</sup> Stanley Wood  
Charleston Ill.

Phonograph  
TAE on

PEARSON'S EXCAVATOR!



(Patent Procured by Clarence A. Chandler, Patent Attorney, Washington, D. C.)

ELLIS S. PEARSON,

INVENTOR OF EXCAVATOR

R. F. D. 2, BRADFORD, OHIO.

*Bovington*  
*Bovington O.*

R. F. D. 2

Mr Thomas Edison.

Dear Sir.

*There are much better  
ones than that  
when there are 3 or  
more records on  
it. I am making  
one myself.*

I have an Edison  
phonograph, and have noted the improvements  
on it in the last three years. I am an inventor  
myself - I have given some thought to your  
machine, and have studied all our history to  
stop the music while changing the record,  
and studied on an automatic reversible  
cylinder. While one record is playing, to place  
another record ready to sing around and not  
stop the phonograph. I have not made any  
model or tried to experiment on it as I am a  
farmer and live on a farm so I have not  
very much chance or time to experiment. Now  
I thought I would write to you and if you  
thought my ideas worth anything to  
your invention I would sell them to you  
for I will not get any patent on your work  
I would rather sell this to you.

I will explain my Ideals to you if you  
think it will be an improvement to your  
machine, I beg to remain  
Still await an early reply. Your Very Truly

Ellis S. Pearson  
Corning Co  
C.

Phono - TAE

Aug 6<sup>30</sup> Hollidays Cove N. Va June 28<sup>th</sup> 09

Mr. Thos. A. Edison

Say that we are ready  
to buy any meritorious  
Orange Grove to improve the  
Phonograph but cannot undertake

Dear Sir:-

I have mounted an improved  
you showed me a  
form of record for the Phonograph, which I  
think would be practical, providing a suitable  
material for making it can be found.  
Would you be interested enough to have me  
explain it to you?

I am not in any way connected with the business  
nor have any money to experiment or take out  
a patent on it.

If, after you examine it, & wish to take the matter  
up we could arrange terms.

Hoping to hear from you I am

Yours truly  
H. A. Sanders

[PHOTOCOPY]

FORMA M. 1.

## "VIA GALVESTON"

MEXICAN TELEGRAPH COMPANY

United States and Europe.

"Via GALVESTON."

No.	No. WORDS	M. M.
-----	-----------	-------

TIME	CHARGES
------	---------

To W.H. Miller c/o ZYLOTIC, NEW YORK.

July 27th, 1909.

BLEIHAKEN ESQUIPEIS WITH PRESIDENT EXAGERONS JAULA HOOGGEZIND

BY TRAIN ADVISE.

TKNNVXNIXXGSENNKNNKXKXZVBNENNNXKX

VERIFIER

Translation: Arrangement not yet completed. Nothing has resulted from the interview with President. Will let you know as soon as possible. In order to save time can return by train. Advise.

Werner.

### CONDICIONES.

[illegible]

*Firma del expedidor.*

*domicilio.*

Phono - Ed - Notes  
WR Wills  
8/13/41

Lapidary 176 Summer St  
Boston

My Dear Mr Wills -

Would it be ~~an~~ a very  
expensive operation to saw  
out of diamond cleaved plates  
sections. 20/1000 square &  
100/1000 long -

I could then chuck the pieces  
& grind a rounded end on to  
follow the record in a plough  
we have a new record

material that grinds our  
sapphire & nothing but a  
diamond will stand as  
we get a good price for them  
could afford good price  
for diamonds. Trackers - You

YARD NO. 1  
1810 EIGHTH ST. SO.  
N. W. Phone No. 1275  
T. S. Phone 642

YARD NO. 2  
2848-14th AVE. SO.  
T. S. Phone 3095

BARNEY ANDERSEN COMPANY  
FEED AND FUEL

MAIN OFFICE 1010 EIGHTH STREET SOUTH



*W. C. Anderson*  
Minneapolis, Minn., Aug. 18-1908

Mr. Thomas A. Edison,  
Orange, N. J.

Dear Sir:-

Kindly pardon me for the liberty I am taking in addressing this letter to you. The reason I write is that I have a plan for a machine in which your Phonograph will play a most important part.

One of these machines could be installed at every Penny Arcade, Amusement Park and other public places. It is on the slot principle but will be capable of earning twice if not four times the amount taken in on the ordinary slot machines using song and speech records.

It is some thing that would surely TAKE and it would be worth your while to investigate my plan.

In return for my plan, providing you can use it, I will want in your first letter a written agreement that you will give me free of charge One Edison Home Phonograph, Combination Type, and every thing to go with outfit priced at \$52.50 complete. Also 100 Edison Records my own selection.

On receipt of such an agreement properly signed I will write you explaining in full my plan which I am quite sure will not only be a good money maker for the Edison Company but also for those in whose places this new machine is installed.

I have given you the first chance and if I don't hear from you inside of ten days I will make some other Company the same offer.

Very truly yours,

*C. A. Lundberg*  
C. A. LUNDBERG,  
1700-11th Ave. So.  
MINNEAPOLIS, - MINN.

*photo:  
diamond*

W. R. WILLS  
LAPIDARY AND WATCHMAKER  
MANUFACTURER OF  
ALL KINDS OF FINE JEWELS AND STONE WORK FOR  
SCIENTIFIC AND MECHANICAL PURPOSES  
DIAMOND DRILLS AND CUTTERS A SPECIALTY

*File*

*Aug 28 1909*

BOSTON, MASS. Aug., 20, 1909. 19

Thomas A. Edison, Esq.,  
Orange, N.J.

My dear Mr Edison:-

In regard to the diamond tracker , I would say that I have been experimenting with it since I wrote you. I find that they can be made complete for about \$3.50. Of course, you are well aware that it is almost an impossibility to put a fine polish on a diamond ball. We can put an extra polish on a diamond cup and bring it up to a very fine edge. I would suggest that you make a diamond cutter to cut your roll; I think if it is properly made that it will cut your roll so smooth that it will not wear your sapphire ball.

In stating the above price, would say that \$3.50 would be for large numbers( of course, a small number would cost more) and this would give you the thing complete already for the machine.

I would like a small piece of the material to experiment with,- that is if you have no objections.

Yours very truly,

*W. R. Wills*

*Motion Pictures*

72'

Sept. 22, 1909.

Mr. Dyer:-

In re. your memo. 869: Mr. Wrazy wishes to know the phonograph which you recommend for the purpose of recording the language of some Asiatic Tribe, which he is about to investigate, and after consultation with Messrs. Hird and Zarembo, I think he should be advised that a Standard machine with a recording horn and recorder, would fill his requirements.

He makes certain other inquiries as to our Asiatic records, which I can answer, but he also wishes Mr. Edison's photograph and autograph for the purpose of inserting it in a book which he is about to publish. Shall we give him these letters?

G.F.S.

GFB/ARK.

CABLE ADDRESS: "ZYMOTIC, NEW YORK"  
A. I. A. R. C. COMMERCIAL, LIEBERS, HUNTING'S AND WESTERN UNION CODES USED.

TELEPHONE.  
1352 STUYVESANT.

FOREIGN DEPARTMENT  
OF THE

TRADE MARK  
*Thomas A. Edison*

NATIONAL PHONOGRAPH CO.  
EDISON MANUFACTURING CO.  
BATES MANUFACTURING CO.

FACTORIES:  
ORANGE, N. J. U.S.A.

10 FIFTH AVENUE.

NEW YORK, N.Y.

LONDON, PARIS, BERLIN,  
BRUSSELS, SYDNEY,  
MEXICO CITY,  
BUENOS AIRES.

EDISON PHONOGRAPHS  
AND RECORDS.  
EDISON PROJECTING KINETOSCOPES  
AND ORIGINAL FILMS.  
EDISON PRIMARY BATTERIES  
AND FAN MOTION OUTFITS.  
BATES NUMBERING MACHINES.

*New York, U.S.A.*

Oct. 12-1909.

SUBJECT: INCREASED DUTY ON SAPPHIRE BLANKS.

Mr. J. F. Scull,

Legal Department,

Orange, N. J.

Dear Sir:--

In accordance with your instructions, I have to-day instructed our Custom Brokers Messrs. Niebrugge & Day, to pay the advance duty on the Sapphire Blanks under protest, and have advised them that we are placing the matter in the hands of Messrs. Comstock & Washburn to contest same for our account. The last mentioned concern are willing to handle the matter upon the basis of the usual contingent fee ( 50% of the amount recovered).

I enclose herewith, copy of communication received from Messrs. Niebrugge & Day, also copy of a letter received from the Treasury Department addressed to the Collector of Customs, having reference to this matter.

Yours very truly,

*Walter Strom*  
Manager Foreign Department.

encc/

[ENCLOSURE]

(Copy)

Hiebrugge & Day,

New York, October 8th, 1909.

Mr. Walter Stevens, Manager,

Foreign Department,

National Phone. Co.,

New York City.

Dear Sir:-

We beg to enclose herewith copy of decision of Treasury Department dated October 6th relative to your Sapphire blanks.

We obtained an opinion from the Collector as follows:-

Merchandise not being semi precious stones would not seem to be covered by paragraph #112 a 50% Advalorem.

Not being suitable for use in manufacture of Jewelry: doub  
lets, artificial synthetic or reconstructed pearls, rubies or other  
precious stones, would not seem to be covered by paragraph #449 at 10  
or 20% Advalorem.

Not being ready for use as parts of phonographs, gramophones  
graphophones and similar articles would not seem to be covered by  
paragraph #460, at 45% Advalorem.

The proper rate would seem to be 35% advalorem under paragraph  
#95 as articles--composed of--mineral substances--not decorated. The  
Appraiser reported as follows:-

"Value and beauty make precious stones. There is no hard and  
fast rule as to what is precious or semi-precious. This merchandise is  
unfit for a gem stone and in the opinion of this office Paragraph #112

[ENCLOSURE]

NATIONAL PHONOGRAPH COMPANY  
FOREIGN DEPARTMENT

-2-

is proper classification".

In view of the decision of the Treasury Department will you kindly take up the matter of placing this in the hands of your legal department or Comstock & Washburn upon the basis of usual contingent fee as it seems to be clearly intimated by the Treasury Department that the matter will have to be thrashed out in the courts and it is advisable to have the protest examined by the attorneys before filing.

Until final decision duties will be assessed at the rate of 50% advalorem.

Yours faithfully,

Niebrugge & Day.

[ENCLOSURE]

NATIONAL PHONOGRAPH COMPANY  
FOREIGN DEPARTMENT

COPY

90969

69186  
E.

Treasury Department,

Office of the Secretary, Washington, October 6, 1909.  
A.G.K.

The Collector of Customs,

New York, N.Y.

Sir:-

The Department is in receipt of your letter of the 27th ultimo, in which, transmitting consular invoice #1753 covering certain sapphires said to be intended for use in the construction of phonographic instrument you invite attention to the appraiser's return of the merchandise as "Gfs. Sapphires - 50% - Tar. 112".

You suggest that sapphires are precious stones and are accordingly dutiable under paragraph 95 of the tariff act of August 5, 1909, which provides for articles composed wholly or in chief value of earthy or mineral substances, it being admitted that the sapphires in question are not suitable for use in the manufacture of jewelry.

While the department concurs in your view that precious stones are dutiable either under paragraph 95 or paragraph 449, it is not satisfied that the sapphires under consideration are in fact precious stones, and by reference to the Board's decision of July 16, 1903, G.A. 5382, T.D. 24577, you will observe that it was held that sapphires were dutiable as precious stones either directly or by similitude.

If these stones are only dutiable as precious stones by similitude and are not in fact precious stones, there is some merit in the return of the appraiser as semiprecious stones under paragraph 112, and to the end that this question may be reviewed by the board, and if, deemed expedient, by the Courts, you are hereby directed to assess duty upon the sapphires covered by invoice #1753 under paragraph 112 at the rate of 50% advalorem.

The inclosure of your letter is herewith returned.

Respectfully,

(Signed) C.D. Hilles,  
Acting Secretary,  
C.P.H.

(1 inclosure)

*Motion Pictures*

721

October 13, 1909.

Mr. Dyer:-

Your memorandum herewith: On June 15th, 1909, Mr. Wm. Pelzer, Mr. Westee and yourself, were elected directors of the La Compania Edison Hispano Americana. On the same day you were elected President, Wm. Pelzer, Vice-president, and Mr. Westee Secretary and Treasurer.

G.F.S.

GFS/ARK.

796

October 19th, 1909.

Mr. Wilson:-

I return you herewith correspondence in reference to the duty on sapphire blanks. The duty of 50% fixed by the customs authorities has been protested and the matter is now in the hands of Comstock & Washburn on the usual 50% contingent fee.

In reference to your query as to the duty to be charged on rough sapphires, I consulted with Mr. Niebrugge, one of our custom brokers, and he has assured me that rough sapphires would come in free, under Paragraph 585, "diamonds and other precious stones, rough or uncut and not advanced in condition or value from their natural state by cleaving, splitting, cutting or other process, including glaziers' or engravers' diamonds not set." I agree with Mr. Niebrugge.

It seems probable that the best we can do with sapphire blanks would be 35% ad valorem.

G. F. Skull.

GFS/ARK.

Photo - TAE

Oct 30-1909

W.R. Wills  
Lapidary

176 Summer St

Boston Mass

I send enclosed sample of  
sapphire which we are for making  
Amber's records. If this form is  
too difficult to make in diamonds  
we could possibly use it thus



The material I propose to use in the  
record is very hard & collects grit  
which accounts for wearing of sapphire.  
Please make a sample send as  
soon as possible.

T.A.E.

Photo  
D. W. R. WILLS  
LAPIDARY AND WATCHMAKER  
MANUFACTURER OF  
ALL KINDS OF FINE JEWELS AND STONE WORK FOR  
SCIENTIFIC AND MECHANICAL PURPOSES  
DIAMOND DRILLS AND CUTTERS A SPECIALTY

*Wills*

NOV 2 1909

My dear Mr. Colson

BOSTON, MASS., Nov. 3<sup>rd</sup> 1909

I am just back to my office after an attack of heart trouble & find your communication. I regret to say that in the condition I am in at present I shall not be able to attend to your order for several days. My health has not been the best for several months but I think it is some what improved. I want to be at my best when I tackle a job like that. The only doubtful thing about it is polishing the ball sufficiently. However when I feel able I will try it, which I hope will be soon.

Yours Very truly  
W. R. Wills

[ENCLOSURE]

**My Mitral Valve.**

The doctors tell me that my mitral valve has got a little leak,  
That the hinge is old and rusty and it has a little creak.  
They tell me that the blood regurgitates  
Because my little valve don't closely shut its gates.  
They tell me that my heart is big and crowded out of place;  
That I must go it very easy and slacken up my pace.  
They tell me to go so slow and easy and to keep so very cool  
That the world will look in wonder and take me for a fool  
They tell me, and sad is it to relate  
That if I live to be an hundred, I'll die as sure as fate.  
O, these doctors are so funny and yet so very good.  
They would n't hurt your feelings, not even if they could.  
The substance of their story when plainly, frankly told  
Is, they gently want to tell me that I am growing old.  
Well, I'll admit the facts and allow them to be true  
But it does n't cause me worry, nor does it make me blue;  
I've had many years of labor, I've had many days of fun,  
And the years I've left behind me, they number Seventy-One.  
And the years I have before me no prophet can foretell  
For I'm feeling young and kiddish, yes, I'm feeling very well.  
And so my little valve, just do the best you can  
While I conceive and formulate a plan.  
You have been so very faithful and been so very true  
That I'll go a little slower, and try to favor you.  
Yes, I'll go a little slower, I'll not run up the hill  
When I travel on the level, they'll think I'm standing still.  
Whatever that I do, I'll not do it to excess  
But will imitate the schedule of the B. & A. express.  
If I'm due today I'll be along tomorrow,  
If I'm not on time no trouble will I borrow;  
But be assured my little valve, I will do my level best  
To be a little lazy and let nature do the rest.

W. R. Will.

REFER TO THIS NUMBER  
IN YOUR REPLY

973

MEMORANDUM

*financial*  
FRANK L. DYER,  
ORANGE, N. J.

Mr. Harry F. Miller:

11/13/00.

In connection with the personal contract between Mr. Edison and Fred K. Babson, which you have on file, Mr. Babson has already advanced \$10,000 for Mr. Edison's account and has asked me to have this amount paid. Please let him have a check at your early convenience. I have explained the matter to Mr. Edison and he approves of this payment.

FLD/TUE

F. L. D.

Walter Wilber -

DEC 2-1899  
Dear Uncle Edison: - This is Tough - can you send her  
the words -

In your phonograph I heard a very sweet  
song Bunker Hill, but can not understand what  
they say. So I thought about you, because you must  
be a nice and good man and I pray you that you  
send me the words of it and I will be very grateful  
to you. - Please Dear Mr. Edison do it, when you  
will have plenty time, I am a little farmer  
girl and we had plenty fun ~~listening to~~ <sup>listening to</sup> your machine.

Irene Finnes

Please dont be angry with me I cant write  
better

Waltham, Mass. via Duck  
Lake

7/25/09  
Kunz

Kunz

Can you give me address of ~~aphel~~  
a man who can cleave bort diamonds  
in thin plates, want to ~~se~~ cut plates  
up to make points for phonograph  
Experiment, Does your Forrest Hill  
factory have such a man -

Edison

12/4/09

Dec. 14-09

Wrote 12/14/09

Wills

How are you getting along  
with the diamond  
reproducing point.  
If you can do it I ~~am~~  
~~expecting to~~ think I  
can place an order  
for several thousand  
with you

Edison

MEMO. 1076

TAE, Inc. - Org.

Mr. Weber:

12/15/09.

The following is Mr. Edison's memorandum on the subject discussed this morning; which you will please keep most confidential:

1. Use top floor of Glen Ridge factory.
2. Start up boiler for heat. Get a fireman who is an engineer, so that when we want power he can run engine.
3. See that there is a lighting dynamo there when we start power plant.
4. John Ott will design graphiting machine.
5. John Ott will make drawings for copper-plating apparatus from instructions of Albert Wurth.
6. Walter Miller to give John Ott sketches from which to design a good recording machine. One will be made, and if O. K., make six more.
7. Walter Miller will make all experimental masters at Glen Ridge.
8. Design three styles of regular machines, one of which shall be mounted in a cabinet of a different type from the Victrola.
9. Edison to keep at diamond points.
10. Either purchase the disc machinery of Leeds & Catlin and ship to Glen Ridge; or if not possible, purchase accumulator and one press and probably rolls and mixer for regular disc stuff for experiment only.
11. Edison and Aylsworth to work up disc with new material.
12. Aiken to be in charge at Glen Ridge, calling upon Pettit for expert advice and assistance.

As to points 2 and 3 above, I wish you would give them immediate attention. As to point 10, I am looking up the advisability of purchasing the machinery now and if unsuccessful I will let you know so that you can order the machinery direct.

F. L. D.

(Copy to Mr. Wilson)

4<sup>th</sup> John St. Arrives about 7:30 p.m.  
muchness. 80 after lunch

5<sup>th</sup> Alden has ordered coffee  
planting land and will arrange  
details for marketing master - St  
not necessary, ~~at least not necessary~~

6<sup>th</sup> Melan will have meeting  
9 showing sketches to John St -  
meeting attended to.

7<sup>th</sup> Melan will make experimental  
records in H. 4.

**1909. Phonograph - Edison Business Phonograph  
Company (D-09-41)**

This folder contains correspondence and other documents relating to the Edison Business Phonograph Co. Included are items pertaining to company stockholders and directors, taxes, and sales. Also included are memoranda concerning research and development and a circular by Edison explaining the motor sold with the business phonograph. Among the correspondents is Frank L. Dyer, president of the Edison Business Phonograph Co.

Approximately 80 percent of the documents have been selected. The items not selected consist primarily of letters of transmittal and acknowledgement.

[FROM FRANK L. DYER]

*Legal*

742

Jan. 27, 1909.

Board of Assessors of Cook County,  
Chicago, Ill.

gentlemen:-

This Company has recently paid taxes for the year 1908, on the valuation of \$5000. I write this letter to inform you that since September 12, 1908, the Edison Business Phonograph Company has not been engaged in business in the State of Illinois, and since that time has owned no property in that state, having disposed of all its assets in Chicago, which were all it had in the State of Illinois on the date I have given.

I would thank you very much to acknowledge receipt of this letter, and also to let me know if your records have been changed to correspond with the facts above set forth, so that there will be no assessment against this Company for the year 1909.

Yours very truly,

President.

HHD/MH

Mar. 8, 1909.

Thomas A. Edison, Esq.,  
Fort Myers, Fla.

Dear Mr. Edison:

I enclose report on the Edison Business Phonograph Co. for the month of January, 1909, showing net profits of \$601.32. Of course this is better than a loss, but there ought to be a larger profit on total sales of over \$1,000.00. More and more I am becoming convinced that in our eagerness in the past to meet the price of the Dictaphone and by making improvements without correspondingly increasing the selling price we are offering too much for the money and are not offering dealers sufficient profit to enable them to successfully handle the business. It is easy enough to sell the machines, but the difficulty is to keep them sold after they are once put out.

Yours very truly,

FLD/IWW  
Enc-

REFER TO THIS NUMBER  
IN YOUR REPLY

460

MEMORANDUM

FRANK L. DYER,  
ORANGE, N. J.

Mr. Durand

3/15/09.

*Success  
to clear  
with*

I send you herewith a memorandum from Mr. Walker, bringing up the suggestion of Mr. Westee, that the Edison Business Phonograph Co. should be brought back as a department of the National Phonograph Co. You will remember the separate corporation was formed in order to comply with various State laws when we were maintaining branch offices in different cities. The necessity for a separate company does not now exist, but my personal opinion is that, although we might save some expense, it would be unwise to change back now. However, I would like to have your views in full.

FLD/IWW

F. L. D.

Enc-

*W. L. D.*

[ENCLOSURE]

Mr. Dyer:

Some time ago the matter of discontinuing the Edison Business  
Phonograph Co. and simply making this a Department as it was  
previously. <sup>was suggested</sup> Mr. Westee asked me whether anything had been done.  
I believe the idea is that this would do away with a lot of book-  
keeping and other separate records, thus reducing expense.

3/10/09.

I. W. W.

*W. W. W.*

FRANK L. LOVER,  
PRESIDENT & GENERAL COUNSEL.

C. H. WILSON,  
VICE-PRESIDENT & GENERAL MANAGER.

A. WESTEE,  
SECRETARY & TREASURER.

## EDISON BUSINESS PHONOGRAPH CO.

ORANGE, N. J.

MANUFACTURING APPLIANCES FOR THE

EDISON COMMERCIAL SYSTEM



THOMAS A. EDISON  
EDISON

DICTATED TO THE  
EDISON BUSINESS  
PHONOGRAPH

C. J. H.

*Orange, N. J.* June the 7th.  
1909.

Mr. Frank L. Dyer,

President.

MR. DYER:

As the proposition which has been offered me by another company seems to be one in which I can make a much larger salary than I am now making, and where it will undoubtedly benefit me physically, I wish to tender my resignation to take effect next Saturday.

I am sure you will not blame me for taking this step, as it is a matter of money with me just at present and bright prospects for a good investment.

Thanking you for the way you have treated me in the past, and sincerely trusting that you will have the same friendly feeling toward me, I beg to remain,

Yours very truly

*C. J. Hibbard*

Ediphone - many.

72

June 9, 1909.

Mr. Charles E. Hibbard,  
Factory.

My dear Mr. Hibbard:

Your letter of the 7th inst. has been received,  
and, as you have evidently made up your mind after careful consider-  
ation, to sever your relations with us, I will have to accept  
your resignation.

I wish you success in your new field, and am,

Yours very truly,

EDD/IWW

President.



Oct. 21, 1909

Mr. Frank L. Dyer:

Dear Sir:-

I quote from a letter just received from E. C. Barnes, Chicago dealer.

"I understand that the New United States Phonograph Company (Mr. Hibbard) are ready to put out their eight minute records within thirty days. They have already begun to solicit for commercial machines in Chicago. Are not promising delivery but just saying "Wait for it". I haven't seen the man nor have I heard his name, but several of my customers have told me about it. "

In this connection I would like to say that certainly as we have discussed it before we should have a man designing a complete new machine for us realizing that it will take a long time for us to satisfy everyone in regard to a new Model and try it out.

Is there any hope of having a person detailed on this work?

N.O.Durand.

GPW

*E. Durand*  
*J. H.*

Encl. Address "Edison, N.Y."

From the Laboratory  
Thomas A. Edison.

Orange, N.Y.

December 15th, 1909.

TO WHOM IT MAY CONCERN:

The Universal Electric Motor sold with my Business Phonograph has been designed to operate on any class of commercial lighting current--whether direct or alternating--110 or 220 volts without the substitution of separate wire resistances for different electrical conditions. By means of the one resistance on my Universal Motor having a sliding contact to vary it, all conditions are taken care of making the motor strictly universal. Under all of these electrical conditions the amount of current ordinarily consumed by the Universal Motor has been found to be less than one quarter of an ampere, which is about half of the current consumption of former motors sold with the Business Phonograph.

Thomas A. Edison.

44

December 17th, 1909.

Mr. Frank L. Dyer,  
President.

Dear Sir:

I understand from Mr. Schiff that he is about to remove his work to the Laboratory, and will await instructions from Mr. Edison or yourself in regard to new work that he is to undertake.

Nothing has been done as yet upon my new Business Phonograph, and I mention this to you so that one of his first tasks will be to go on with the design of our new machine.

Yours very truly,

NELSON C. DURAND.

HCD/AL

*Nelson*

REFER TO THIS NUMBER  
IN YOUR REPLY

1100

MEMORANDUM

FRANK L. DYER,  
CHANCE, N. A.

Mr. Durand:

49  
12/27/09.

I hand you herewith a memorandum from Mr. Dyer Smith, dated December 24th, in which he reports on the patents relating to alternating current motors. He reaches the conclusion that no patent exists that contains claims which would be infringed by the manufacture by us of the motor that Mr. Bliss has invented. He refers to a number of patents in his memorandum, and I suggest that you have him order copies of these patents and submit them to Mr. Bliss for his examination. Possibly Mr. Bliss may be familiar with them. In view of this memorandum, I do not see any reason why you and Mr. Bliss should not go right ahead and formulate your plans, and after you have done so, bring them up to me and we will

(2)

talk them over. What I mean by this is that you and he want to draw up a complete report as to exactly what you propose to do, what types of motors you propose to build, how much machinery you have to buy, the number of employees that will be necessary and the character of drawings which will have to be made; and when you have done this we can take up the matter for final and definite instructions and then submit the whole thing to Mr. Edison.

FLD/IWW  
Enc-

F. L. D.

721  
*Motion Pictures*

Dec. 31, 1909.

Mr. Dyer:-

Your memo. No. 1093: I find that according to the by-laws of the Business Phonograph Company, the vice-president must be a director, and therefore, a stockholder. The only stockholders of record are yourself, 8 shares, Mr. Wilson, one share, and Mr. Westee, one share. The easiest plan to make Mr. Durand vice-president would be to have Mr. Wilson's share transferred to him, and have Mr. Wilson resign as director, as well as vice-president. If, however, you wish to retain Mr. Wilson as a director, we can either amend the by-laws, which can be done by vote of the directors on three days' notice, to provide for a fourth director, or we can remove the condition that the vice-president shall also be a director. Under the laws of New Jersey, the President must be a director, and though nothing is said of the vice-president, it would seem that unless you wish Mr. Durand to be vice-president in name only, he should have the same qualifications as the president, in case it should be necessary for him to act as president.

I would advise that either my first suggestion that Mr. Wilson resign as director, or my second suggestion, that four directors be provided for, be adopted.

G. F. Soull.

GFS/ARK.

**1909. Phonograph - Edison Phonograph Works  
(D-09-42)**

This folder contains correspondence and other documents relating to the business of the Edison Phonograph Works. Among the items for 1909 are memoranda by Peter Weber, superintendent of the Edison Phonograph Works, regarding shop orders, production schedules, and specifications; letters by Frank L. Dyer, general manager, concerning stockholders; and a list of storekeepers by J. M. Zaremba, manager of the Stock Department.

Approximately 40 percent of the documents have been selected. The items not selected include routine memoranda regarding shop orders and routine letters of transmittal and acknowledgment. Also not selected is correspondence about labor unions and proposed employee liability legislation in New Jersey.

Jan. 14, 1909.

Mr. Waterman:-

D  
1909

Phon. - Manuf.

Beginning at once, arrange for the following schedule of machines, attachments and parts:-

GEN. MACHINES:

Carry 1,000 machines in stock, produce parts for 750 machines (but go slowly on those parts that may be changed on a new model); and base the assembling of machines on the shipment of previous week.

STANDARD MODEL B:

This machine will be superseded by the Model C (The Model C machine is also to be furnished on orders from the Technical Supply Company).

Hereafter, all top plates for Model C machines shall be drilled for the combination attachment, so that the Model C can be converted into a Model D machine at any time.

Arrange to bring up the regular stock to 1,000 machines, produce parts for 500 machines, and base the assembling on previous week's shipment.

STANDARD MODEL D:

Carry in stock 7,500 machines. Produce parts for 2,000 machines per week; and govern the assembling by previous week's shipments, so that the stock of 7,500 machines shall be kept intact.

The storekeeper must arrange the stock of machines in such a manner ~~that~~ the oldest machines will be taken out first for shipment.

HOME MODEL B:

We now have 700 of these in stock. Discontinue making new main shafts, as we have a large stock on hand, and we expect a great many returned in exchange for the new attachments. Also discontinue drilling bodies.

The following parts are used exclusively on the Model B machine, and the Assembly Stock Room has the following quantities:

Swing arm center-----	300
Main shaft center-----	1,000
Swing arm center adjusting screw-----	10,000
Lift lever-----	5,500
Lift lever screws & washers--	10,000
(These screws and washers are also used on the Business phonograph)	
Locking device-----	2,500
Locking device spring-----	1,500
Locking device studs-----	300
Back rods-----	500

Discontinue assembling until stock is reduced to 500; then base

(2)

Mr. Waterman:

Jan. 14, 1909.

the assembling on shipments of previous week, to keep this stock intact.

The production of parts has to be governed by the orders for extra parts, in addition to the number of machines shipped.

HOME MODEL C:

Accumulate a stock of 100, and maintain it.

HOME MODEL D:

Carry a stock of 3,000 machines. Produce parts for 1,500 machines per week, and base the assembling on previous week's shipments.

Storekeeper also arrange his stock so that the oldest machines will be the first shipped out.

TRIUMPH MODEL B:

We have in stock 139 machines.

Discontinue assembling or making parts until stock is reduced to 25, unless the filling of repair orders renders it necessary to make parts before that time.

TRIUMPH MODEL C:

Carry 25 in stock, and only make parts for repair orders.

TRIUMPH MODEL D:-

Carry 500 in stock, and bring through parts for 200 machines per week, and base assembling on previous week's shipments, so as to maintain a stock of 500.

STANDARD ATTACHMENTS:

Discontinue assembling until stock is reduced to 20,000. Bring parts through for 5,000 per week, and govern the assembling so that the stock of 20,000 attachments shall be maintained.

HOME ATTACHMENTS:

Get up a stock of 10,000, then produce parts at the rate of 2,500 per week, and base assembling on shipments of previous week.

TRIUMPH ATTACHMENTS:

Get stock up to 1,000, then produce parts at the rate of 500 per week, and assemble to replace shipments of previous week.

IDELLA ATTACHMENTS:

Carry 25 in stock, and base ~~assemblage~~ assembling on shipments of previous week.

(3)

Jan. 14, 1909.

Mr. Waterman:-

MODEL H REPRODUCING:

We have about 30,000 in stock.  
Assemble at rate of 5,000 a week.  
Bring parts through at the rate of 7,500 per week.

MODEL C REPRODUCING:

Keep up a stock of 10,000.  
Get out parts at the rate of 5,000 per week, and base  
assembling on previous week's shipments.

ALL NIGHT WORK IS TO BE STOPPED AND THE FACTORY WILL  
SHUT DOWN AT TWENTY O'CLOCK ON SATURDAYS, and in case the schedule  
of any of these machines or parts should be larger than can be car-  
ried out on a strictly day-work basis, foremen will please advise  
me about it.

P. WARE.

Copy to all foremen, Messrs. Youmans, Leeming, Hird, Van Winkle,  
Zarucha and McGearn.

Also to Messrs. Dyer and Wilson.

<sup>D</sup>  
1909

TAE, Inc. - Org.

LIST OF STORMKEEPERS.

Not found	from Nos. 1	to	4 ind.
Mr. Bradley	"	5	" 1250 "
Mr. Dishaw	"	1251	" 2500 "
Mr. Moore	"	2501	" 3750 "
Mr. Hopper	"	3751	" 5000 "
Mr. J. Hooper	"	5001	" 6250 "
Mr. Morris	"	6251	" 7500 "
Mr. Holer	"	7501	" 8750 "
Mr. Cuenin	"	8751	10000 "

J. M. ZARIMBA.

JAN. 25-09.

D  
1909

TAE, Inc. - Org.

Jan. 29, 1909.

TO ALL FOREMEN:-

This is to advise you that I have appointed Mr. C. Schiffel my assistant in all engineering work.

Hereafter all designs of articles manufactured will be made under his supervision in the Engineering Dept.

All experimental work must be done in strict accordance with drawings or other instructions supplied by Mr. Schiffel or myself, and under no circumstances should changes be made in experimental work until such changes have been recorded by him and approved by me.

As soon as the experimental model has been finished and accepted, a manufacturing or production order will be placed in the shop covering the quantity to be manufactured.

All work necessary to manufacture products of any kind must be done in strict accordance with drawings, specifications and assembling lists furnished by the Chief Draughtsman, Mr. H. T. Oliver.

Should it be desired to make any change in a model which is being manufactured, the matter must be taken up with me. The change must not be made, however, until you receive from Mr. Oliver a new drawing, specification or list showing the change.

PETER WEBER.

Copy to Messrs. Dyer and Wilson.

PH/STB

Mr. Waterman:-

D  
1909

Feb. 2, 1909.

Phon. - Manuf.

Referring to the factory schedule for machines and parts called for by my memorandum of January 14, please note that the same is hereby withdrawn and that the following schedule takes its place:-

**GEN. PHOTOGRAPHS:** Carry 500 in stock, ready for shipment, and 500 more in Testing Department, ready to be delivered to Stock Room when required. Carry finished parts in stock sufficient to assemble 1,000 machines, but go slowly on such parts as may be changed when the combination machine is adopted. Base assembling on shipments made during previous week.

**STANDARD PHOTOGRAPHS, MODEL C:** Carry 500 in stock, ready for shipment, and 500 in Testing Department, ready to be delivered to Stock Room when required. Carry finished parts in stock, sufficient to assemble 2,000 machines. Base assembling of machines on shipments made during the previous week.

**STANDARD PHOTOGRAPHS, MODEL D:** Carry 1,000 in stock, ready for shipment, and 1,000 in Testing Department, ready to be delivered to Stock Room when required. Carry finished parts in stock, sufficient for 5,000 machines. Base assembling of machines on shipments made during the previous week.

**HOME PHOTOGRAPH, MODEL B:** Carry 150 in stock, ready for shipment, and 100 in Testing Department, ready to be delivered to Stock Room when required. Carry sufficient finished parts in stock to assemble 1,000 machines. Base assembling of machines on shipments made during previous week.

**HOME PHOTOGRAPH, MODEL C:** Carry 25 in stock, ready for shipment, and 25 in Testing Department, ready to be delivered to Stock Room when required. Carry finished parts in stock, sufficient to assemble 250 machines. Base assembling of machines on shipments of previous week.

**HOME PHOTOGRAPH, MODEL D:** Carry 1,000 in stock, ready for shipment, and 1000 in Testing Department, ready to be delivered to Stock Room when required. Carry sufficient finished parts in stock to assemble 5,000 machines. Base assembling of machines on shipments of previous week.

**TRIUMPH PHOTOGRAPHS, MODEL B:** Carry 25 in stock. Base assembling and finished parts on shipments of previous week.

**TRIUMPH PHOTOGRAPHS, MODEL C:** Carry 10 in stock, ready for shipment, and 10 in Testing Department, ready to be delivered to stock when required. Carry sufficient finished parts in stock to assemble 100 machines. Base assembling on shipments made during previous week.

**TRIUMPH PHOTOGRAPHS, MODEL D:** Carry 100 in stock, ready for shipment, and 100 in Testing Department, ready to be delivered to stock when required. Carry sufficient finished parts in stock to assemble 1,000 machines. Base assembling on shipments made during previous week.

(2)

Mr. Waterman:-

Feb. 2, 1909.

**STANDARD ATTACHMENTS:** Discontinue assembling altogether until present stock of finished attachments is reduced to 5,000. Then base assembling on weekly shipments. Carry sufficient finished parts in stock to assemble 10,000 machines.

**HOME ATTACHMENTS:** Discontinue assembling altogether until present stock of finished attachments is reduced to 5,000. Base assembling on weekly shipments. Carry sufficient finished parts in stock to assemble 10,000 machines.

**TRIUMPH ATTACHMENTS:** Discontinue assembling altogether until present stock is reduced to 500. Base assembling on weekly shipments. Carry finished parts in stock, sufficient to assemble 2,500 machines.

**REPRODUCERS, MODEL C:** After providing for all machines complete except reproducers, we have a stock of 10,472. This is sufficient for present requirements, therefore, the quantity to be gotten out weekly should be based on shipments, so that the amount in stock can be kept up to 10,000.

**REPRODUCERS, MODEL H:** After providing for all machines and attachments complete except reproducers, we have a stock of 9,979. This is sufficient for present requirements, therefore, the quantity to be gotten out weekly should be based on shipments, so that the amount in stock can be kept up to about 10,000.

In arranging to carry and accumulate the different quantities of machines and attachments above specified for stock, the quantities already in stock should be taken into consideration, and if there are more in stock than the number called for, no more should be assembled until stock is reduced to quantities specified, or if there are less in stock than called for, only a sufficient additional number should be assembled to bring the total quantity up to the amount specified. As quantities called for, to be kept in stock, are reduced by weekly shipments, additional ones should come through to keep the stock up to the specified number.

PETER WEBER.

Copy to all foremen and Messrs. Hird, Zarnba, Leaning, Youmans, Redearn and Van Winkle.

Also Messrs. Dyer and Wilson.

D  
1909  
TAE, Inc. - Orig.  
Feb. 26, 1909.

TO ALL FORMERS:-

Please note that the following shop orders will  
be closed February 28, 1909.

The name opposite every number signifies to whom the order  
bearing that number was issued:-

EDISON MANUFACTURING COMPANY:

3388, Brodie,	3393, Dishaw,	3397, Goodwin,
3389, Jamison,	3394, Brodie,	3398, Dishaw,
3390, Schiffel,	3395, Brodie,	3410, Dally,
3392, J. Riley,	3396, Brodie,	3411, J. Peiser;

NATIONAL PHOTOGRAPH COMPANY:

722, Driscoll	749, Dishaw,	827, Nehr,
Driscoll, 723,	750, W. H. Miller,	842, Wurth,
732, Goodwin,	751, W. H. Miller,	843, Goodwin,
733, B. L. Williams,	752, W. H. Miller,	847, Goodwin,
734, Driscoll,	753, Nehr,	853, Goodwin,
736, J. Riley,	754, C. Payne,	856, McCullough,
Schiffel, 737,	755, Goodwin,	860, Dempsey,
738, A. Wurth,	756, A. Wurth,	870, B. L. Williams,
739, A. Wurth,	757, McCullough,	872, Aylsworth,
740, Nehr,	758, Byrnes,	874, E. L. Williams,
742, Nehr,	759, Nehr,	875, Nehr,
742, Nehr,	760, Wurth,	881, Goodwin,
743, Sturm,	761, W. H. Miller,	885, Hard,
744, Sturm,	762, McCullough,	893, Driscoll,
745, Sturm,	763, XXXXXXXX,	894, Sine,
746, Sturm,	764, Aylsworth,	896, Nettle,
747, Sturm,	765, Walter Miller,	899, Driscoll,
748, Sims,	766, Hoyer,	900, Goodwin;
	767, Goodwin,	

EDISON PHOTOGRAPH WORKS:

2291, Driscoll,	2640, Requa,	2887, Dempsey,
2408, Gall,	2647, Nehr,	2890, Lühr,
2487, Baldwin,	2739, Nehr,	2891, Lühr,
2488, Lühr,	2799, Nehr,	2894, O. Weber,
2492, Loder,	2847, Dr. Fessler	2902, Driscoll,
2517, O. Weber,	2849, Nehr,	2903, B. L. Williams,
2518, O. Weber,	2855, Aylsworth,	2904, Trappan,
2519, O. Weber,	2947, B. L. Williams,	2909, Rapworth,
2520, Waterman,	2948, B. L. Williams,	2913, Driscoll,
2521, Waterman,	2949, B. L. Williams,	2917, W. Williams,
2523, Goodwin,	2951, McCullough,	2934, Lühr,
2524, Goodwin,	2952, McCullough,	2950, Dempsey,
2525, McCullough,	2953, McCullough,	2955, B. L. Williams,

(2)

Feb. 26, 1909.

TO ALL FOREMEN:-

2526, McCullough,	2978, Hubbard,	2963, Driscoll,
2527, Driscoll,	2595, Driscoll,	2965, O. Weber,
2528, Dempsey,	2522, Wurtz,	2967, Goodwin,
2529, Malone,	2633, Wuttis,	2973, O. Weber,
2530, Parkhurst,	2630, Waterman,	2976, E. L. Williams,
2532, Parkhurst,	2638, McCullough,	2984, McCullough,
2533, Parkhurst,	2656, O. Weber,	2985, Lahr,
2534, Barber,	2662, Goodwin,	2986, Lahr,
2535, Mitchell,	2679, Oliver,	2988, Lahr,
2536, Leomin,	2685, Driscoll,	3002, Goodwin,
2537, Schall,	2690, Goodwin,	3005, Loder,
2539, Riley,	2696, Lahr,	3013, Hapworth,
2540, Morris,	2697, Otto Weber,	3016, Gall,
2541, Trapnagen,	2710, Hiler,	3026, E. L. Williams,
2542, Trapnagen,	2728, Ott,	3043, E. L. Williams,
2543, Schiffel,	2729, Lahr,	3054, Otto Weber,
2544, Dodd,	2738, Loder,	3057, Goodwin,
2545, Dodd,	2745, E. L. Williams,	4002, Loder,
2546, Wurtz,	2750, Baldwin,	4003, Sims,
2547, Lahr,	2757, Schiffel,	4004, Driscoll,
2548, Sturm,	2764, Schiffel,	4006, E. L. Williams,
2549, Sturm,	2767, Raqua,	4008, Loder,
2550, Hamilton,	2772, O. Weber,	4010, E. L. Williams,
2551, Bradley,	2786, Baldwin,	4014, Waterman,
2553, E. L. Williams,	2788, Waur,	4015, Goodwin,
2554, McCullough,	2820, Hiler,	4016, O. Weber,
2555, Entwistle,	2824, Huanstor,	4020, Driscoll,
2559, Dodd,	2833, Goodwin,	4021, Oliver,
2561, Trapnagen,	2835, O. Weber,	4026, Driscoll,
2563, Raqua,	2850, Driscoll,	4029, Driscoll,
2564, Dismay,	2842, Lahr,	4030, Driscoll,
2577, Gall,	2852, Goodwin,	4034, Driscoll,
2636, Barber,	2863, Lahr,	4035, W. Williams,
2637, Raqua,	2872, Wuttis,	4031, W. Williams,
2639, Morris,	2880, Baldwin,	4037, Lahr,

In future, no labor or material can be charged on the shop orders enumerated above.

If any one or more of these shop orders should not be closed, that is, if the work covered by any of these shop orders has not yet been completed, notify this office at once.

Also turn into this office all other shop orders that you may have in your possession on which the work has been completed and which can be closed.

Strict attention must be given to the above.

PETER WEBER,  
Gen'l Supt.

[FROM FRANK L. DYER]

REFER TO THIS NUMBER  
IN YOUR REPLY

478

MEMORANDUM

TAE, Inc. - Financial  
FRANK L. DYER,  
ORANGE, N. J.

Mr. Westee:

3/16/09.

Regarding the attached letter from the Guarantee Trust Co. of New York, I suggest you write Mr. Newton acknowledging receipt and saying:

"It does not appear from the books of the Edison Phonograph Works that the Guarantee Trust Co. of New York is a stockholder of record and hence no statement of our financial condition could be properly given you. I would say, however, that since August, 1907, no such statement has been issued, except to the regular Commercial Agencies, from whom you can obtain a copy of the report, or, we would be glad to send you a copy should it appear that you represent a bona fide stockholder."

Do you see any objection to saying the above? Dun and Bradstreet having a report on the Works, the Guarantee Trust Co. could undoubtedly get a copy from them. If any objection occurs to you, let me know.

FLD/TWJ  
Enc-

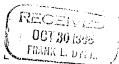
F. L. D.

FITCH, SLATER & RANDALL  
ATTORNEYS & COUNSELORS AT LAW  
30 BROAD ST. NEW YORK  
TELEPHONE CONNECTION

FRANCIS FITCH  
SAMUEL S. SLATER  
FREDERICK S. RANDALL  
CABLE ADDRESS "FITSLARAN" NEW YORK

October 29, 1909.

Frank L. Dyer, Esq.,  
Edison Phonograph Works,  
Orange, N. J.



My dear Mr. Dyer:-

I am preparing some affidavits in the case of the Guaranty Trust Company vs. Lynch relating to the Edison Phonograph Works stock and desire the following information:

What are the numbers of the stock certificates representing the 1440 shares, which were held by the Guaranty Trust Company prior to January, 1909? How many were there of them and how many shares did each represent.

You will have no difficulty in giving me these numbers with reference to 1430 shares and the other ten shares were represented by two certificates, one of which was issued to Paul C. Morf and the other to E. D. Phillips, each for five shares. I have learned that the gentleman, who came and demanded the transfer of five shares to himself and requested a statement as to the condition of the company, is an employee of the Guaranty Trust Company. Inasmuch as you have issued this statement showing generally the condition of the company to these people, I see no reason why I should not ask you to send me a copy of it. I desire to inspect it so that I may discuss the matter intelligently and I do not want it for the purpose of using it in any contemplated action against the Edison Phonograph

Works.

The matter of adjustment with the parties involved of our respective interests so that a sale may be made of the Works stock is proceeding slowly and I am a good deal discouraged over it. If you can possibly do this for me to-morrow, so that I may have it here Monday, I will be grateful.

Very truly yours,

*Francis Pick*

F/L

Int. Graphophone Co.	520 shares	<u>Certificate No</u>
"	910 "	<del>77</del>
		84
Paul C. Monroe	5 "	119 cancelled
transferred to Geo. R. Hession		<del>127</del>
E. D. Phillips	5 "	120

EDISON PHONOGRAPH WORKS.

*Phow. - Legal*

337

Nov. 1, 1909.

Francis Fitch, Esq.,  
30 Broad Street,  
New York, N.Y.

My dear Mr. Fitch:-

Yours of the 29th ult. was duly received, but I was away from the office on Saturday and could not answer it then. I find that the 1430 shares of Edison Phonograph Works stock, standing in the name of the International Graphophone Company are divided into two certificates, the first No. 77 for 520 shares, and the second No. 84 for 910 shares. Certificate No. 119 was originally issued to Mr. Paul C. Morf for 5 shares, but was cancelled and a new certificate No. 127 was issued to George R. Kissan. Certificate No. 120 for 5 shares was issued to E.D. Phillips.

In giving you this information, I do so with the understanding that it is not to be used for the purpose of any contemplated action against the Edison Phonograph Works, but solely for the purpose of effecting, if possible, an adjustment of the stock question, concerning which we have already had some correspondence.

Yours very truly,

FLD/ARK.

General Manager

#### **1909. Radio (D-09-43)**

This folder contains correspondence and other documents relating to the technical and commercial development of wireless telegraphy or radio. The items for 1909 consist primarily of correspondence with the Marconi Wireless Telegraph Co. of America regarding the renewal of notes held by Edison. Also included are letters of inquiry and items pertaining to former Edison associate, Patrick B. Delany, and his "telepost" system.

Approximately 40 percent of the documents have been selected. The items not selected include unsolicited inquiries and most of the communications of the Marconi company.

Telegraph

Jan. 19<sup>th</sup> - 09

Patric B. Delaney  
(of the Delaney Teleport System)

would like to know if you could

come over to 225 Fifth Ave.

some day before Monday next

wants you to see the Teleport

& how it works.

Can't come too busy  
Edna



Indianapolis

Dear Mr. Edison  
Orange, N.J.  
I have just been  
to a demonstration of Mr. Delany's new  
"Telpost" and am exceedingly interested  
in the same. Would it be asking  
too much Mr. Edison to have your opinion  
on that Telpost stock as an investment.  
I believe your judgment would be the  
highest authority on the subject, and  
my knowledge of all the conditions  
which would necessarily enter into  
the success or failure of this enterprise  
is limited. I have heard it  
remarked that this Telpost will  
repeat the Bell Telephone experience.  
Such looks hardly probable and

still it seems would not be impossible.  
I trust the favor I am  
asking of you is not too great, and  
thanking you in advance I am  
Respectfully yours,  
W. S. Potter

355 Twelfth St  
Clyvia, Ohio

Radio

ALL COMMUNICATIONS SHOULD BE ADDRESSED TO THE COMPANY.

CODES:  
MARCONI,  
WESTERN UNION AND A.S.C.  
CABLE ADDRESS  
"INCOGRAM."

*Marconi Wireless Telegraph Company.*

*of America.*

*Lord Court Building,  
27 William Street,*

TELEPHONES, 5545 | BROAD.

*New York,* March 18, 1909.

Thomas A. Edison, Esq.,  
Llewellyn Park,  
Orange, N.J.

*Mr. Edison  
\$4800.  
Due May 1/09  
H. P. B.  
Renew the note  
Am 3/24/09*

Dear Sir:

When in October last I wrote you asking that the note of this Company held by you and due November 1st, should be extended for a year, I fully expected that long ere this certain work, partially arranged for by Com. Marconi and which would have brought in a large amount of money from the equipment, would have been completed, and that therefore no trouble would have arisen in meeting this note due May 1st.

For reasons which it is not necessary to give to you, as an inventor, my expectations have not been realized, and while I am about able to take care of the running expenses of this Company, extra matters, such as your note, are today slightly beyond me. I am therefore writing to ask if you would kindly renew this note

T.A.E. -2-

falling due May 1st for one year, provided that interest is paid at the rate of 6% per annum.

The equipment which I spoke of above is, for the present, not a matter to place on paper, but if you desire I will personally communicate it to you.

As I expect to be called to England and to be away during the month of April, I write at this early date so that I may be apprised of your good will prior to sailing.

Yours faithfully,

MARCONI WIRELESS TELEGRAPH COMPANY OF AMERICA.

By

*A. J. Cotton*  
Vice-President.

[FROM GEORGE F. SCULL]

*telegraph*

1050

Sept. 20, 1909.

Mr. A.C. Clebel,  
Old Curiosity Shop,  
Wauchula, Florida.

Dear Sir:-

Mr. Dyer has received yours of the 15th inst.  
in reference to the value of shares in the Marconi Wireless  
Company of England, and directs me to say that Mr. Edison  
is not interested financially in either this company or the  
corresponding company of the United States, although he has  
sold them an invention. Mr. Dyer is of the opinion that  
the value of the shares in the Wireless Companies is largely  
a speculative one, although of course, there is a possibility  
of large returns if the plans of the promoters work out  
successfully, the risk in regard to this, however, being  
a large one.

Yours very truly,

GPS/ARK.

~~Assistant~~ President.

**1909. Reiff, Josiah C. (D-09-44)**

This folder contains correspondence by Josiah C. Reiff, a longtime associate of Edison who was involved in protracted litigation (*George Harrington, Josiah C. Reiff, and Thomas A. Edison v. Atlantic and Pacific Telegraph Co. et al.*) arising from Edison's telegraph work during the 1870s. Among the items for 1909 are requests for loans and other favors from Edison, as well as updates on the progress of litigation. Some of the letters contain marginal notes by Edison, agreeing to loans or discussing other matters.

Approximately 30 percent of the documents have been selected. The unselected items consist of letters from Reiff that duplicate information in selected material or that discuss the progress of the litigation but do not involve Edison directly.

J. C. REIFF,  
20 BROAD STREET

TELEPHONE, 754 RECTOR.

New York

July 13<sup>th</sup> 1909

Dear Edison

Your query on my letter of 11<sup>th</sup> recd. Judge Hazel decided the infringement consisted in Gould's fraudulent appropriation of the patent & destroying the value thus, but like all infringement suits the court refers to a master for an accounting, especially where there has been mechanical use.

One case no different from any one the master has dealt with she said so.

We did not attempt to make profit but by mechanical use, for they soon ceased to develop the system, & in 1897 abandoned it and when Gould took control & W. G. made a pooling agreement putting AT&T on a dividend basis.

We simply proved value on basis of my arrangement with Gould, which Judge Hazel decided in our favor, where we were to receive stock.

The master says so little else was made of the Automatic System <sup>mechanically</sup> that no serious damage was done, but if our view is correct under Judge Hazel's decision, <sup>the master says</sup> we were entitled to \$72,557, or AT&T stock at 29½ in 1895, that without interest - but further if the court sustains our view as to the stock & it became worth 60

2

J. C. REIFF,  
20 BROAD STREET  
—  
TELEPHONE, 754-RECTOR.

New York, ..... 190

per share by the pooling arrangement  
of 1897, or \$60 per share in the consolidation  
of 1888, when the Master Co paid \$60 for app  
stock, then we would be entitled to \$622,760  
without interest.

The Master now are not final, his  
mission is to report the facts and  
course if he has any opinion it is  
received reconsidered by the Court.  
Of course the delay is terrible on  
me, but we have a just cause, & that  
far whenever we get a fair show in the  
Court we have always more up to date.  
Of one thing we can be morally sure,  
we will not be put off with a  
cold potato

Yours in confidence  
J. C. Reiff

#5  
Feb 21/5/09

J. C. REIFF,  
20 BROAD STREET  
TELEPHONE 754 RECTOR.

The new device has only a small value  
to an improvement. I will not do anything  
with it at present.

New York, Feb 24<sup>th</sup> 1909

Dear Edison,

If the Patent issued to  
you on the Quadriplex is of special value  
I trust you will not assign it at this  
time.

- 1<sup>st</sup> Because the W & P Co have no just  
claim upon it.
- 2<sup>nd</sup> If it is of real importance (as Quad  
is now first to the public) the Postal  
might want it.
- 3<sup>rd</sup> You may be able to use it dispositive  
to bring some pressure upon W & P  
in our joint interest.
- 4<sup>th</sup> To formally assign anything referring  
to Quad just now would be used by  
the laugher of W & P. To have you & I  
have not in access -  
Saying would not hurt them & would  
hurt us.

Inaction at present is very important  
under the circumstances.

I have at last received copy of the  
master report. I will send you a copy, tomorrow  
with my comments. Irrespective of the  
matter we are sure of the final result of  
our technical. I am, Sir,  
Yours faithfully, J. C. Reiff

J. C. REIFF,  
20 BROAD STREET  
TELEPHONE, 754 REXTER.

New York,

February 18 1909

115 13 000

My dear Edison,

After the death of Mr. Notman who had been acting for us in the Telegraph case, & it became necessary to have some one conduct the matter before the master in the accounting, I employed Judge W.D. Sumner, who unfortunately died on Feb. 5<sup>th</sup> inst.

Up to this time it has not been necessary to have any formal court papers signed, or that the appearance before the master & formal communications between Counsel were readily attended to by Judge Sumner.

Now that the proceedings before the master have been closed & the necessary papers objecting to his report have been prepared by another lawyer, it becomes necessary to have your formal signature in addition, being now because you were always on the

J. C. REIFF,  
20 BROAD STREET  
TELEPHONE, 754 RECTOR.

New York, \_\_\_\_\_ 190

the Court records ~~my~~ name was  
added a few years ago.

I have secured a capable man  
for the detailed work who will be  
supported by counsel when argument  
before the Court is made.

The present purpose is to get certain  
papers filed <sup>now</sup> for this is needed the  
name of an Attorney rather than  
counsel - a nice distinction.

I have frequently conferred with Mr.  
Puckingham, but he can only advise  
me as a friend in this case as he  
has been a Wheeler lawyer until ill  
treatment drove him out, about which  
you already know.

It will only be necessary for  
you to write me a brief letter saying  
any one ~~name~~ I select to act for me  
will be satisfactory. It will in no  
way affect your status or responsibility  
in any form of what I think will be  
what is needed. J. C. Reiff

[ENCLOSURE]

RECEIVED.  
MAR 1 1909  
FRANK L. DYER.

Dyer = I am afraid if I do  
this, the selected attorney  
will hold me for bills

J.C. Reiff etc so far I have not a delegate  
In view of the death  
of Mr. Notman <sup>myself - better tell</sup> Reiff that it is not right  
Burnet, as you find it necessary  
to name another thing for me to do  
represent one ~~person~~ <sup>have out in person</sup> in  
telegraph litigation <sup>in regard to</sup>  
Harrington, Edison & Reiff, any  
person selected <sup>for</sup> ~~for~~ <sup>for</sup> will  
be agreeable to ~~me~~ <sup>the</sup> ~~and~~ <sup>and</sup> ~~dollar~~

+ I don't think he  
should bug me in

to be soaked for a big  
of I'm not like you ~~last night~~  
trouble to make this an  
autograph letter.

I have for the paper only  
prepared. There can be no doubt  
of the result.

J. C. REIFF,  
20 BROAD STREET,  
TELEPHONE 754 RECTOR.

New York, Feb 26 1909

My dear Edison,

You may be sure I have not been idle, especially since the death of Judge Burnet which embarrased me just now because he was doing the detailed work which the more prominent Counsel were too busy to attend to except for big pay money down.

I secured the service of Fred J. Stone (a nephew of old Cyrus W. Field who was ~~father~~ <sup>father</sup> to the Counsel) to act as att. solicitor which is necessary in signing & filing papers in Court & in preparing brief subject to approval of Counsel.

This made it essential to get the names of the old firm of Butler, Stillman & Hubbard off the record.

They have not only done nothing since <sup>24 years ago</sup> Notens death but were still in position to annoy me if the surviving partner (Butler) were to do so.

Judge Wallace the new head of the new firm joined with Judge Parker in signing the brief presented to the Master, & also made a short argument, the brief having been prepared by Judge Burnet long ago. The Master held it a year,



[FROM FRANK L. DYER]

Mar. 9, 1909.

J. C. Miller, Esq.,

20 Broad St.,

New York City.

My dear Sir:

Your letters of the 15th and 16th ults. to Mr. Wilson have been referred to me, and he has requested me to see you regarding the matter. Can you wait it convenient to call at my New York office, No. 10 Fifth Ave., on Thursday afternoon, March 11th, at 3 o'clock, in order that we can have a brief conversation?

Yours very truly,

FID/TWW

General Counsel.

J. C. REIFF,  
80 BROAD STREET  
—  
TELEPHONE, 754 RECTOR.

New York,

May 4<sup>th</sup> 1909

My dear Edison.

Insurance pay day is  
again nearly here. I need \$477.<sup>20</sup> for the  
Penn Mutual on 10<sup>th</sup>, which is next Monday,  
but to avoid possible mishap please let me  
have the check by Saturday 5<sup>th</sup>.

I hope your Southern trip built you  
up good & strong. My holiday week comes.  
I am working with all my energy on  
the brief to be used before the court which  
I suppose will reach our ears within  
3 weeks.

No one but myself (unless it is you) can  
form any idea of the labor involved  
in getting all the facts together. I have  
arranged to meet the topicalists of the  
Trusts and the lies of the opposing counsel.  
It is mighty hard work to fight the Wicks  
& the Bones gang with empty hands.

I don't pretend to attend to any thing else  
but once the brief is completed I will be relieved  
for a while.

Yours faithfully,  
J. C. Reiff

REFER TO THIS NUMBER  
IN YOUR REPLY

734

MEMORANDUM

*legal*

FRANK L. DYER,  
GRANGE, N. J.

473

Mr. Dyer Smith:

6/5/09.

Regarding your memorandum of yesterday, I suggest that you telephone Mr. Reiff that Mr. R. N. Dyer is not doing regular work for us and therefore we have no control over his time and that I do not see very well how he could be asked to look into the matter for Mr. Reiff.

FLD/IWW

F. L. D.

Enc-

J. C. REIFF,  
20 BROAD STREET  
—  
TELEPHONE, 754 RECTOR.

Not going away

New York

July 9th 1908

Dear Edison

Have you ever had what  
they call Shingles?

If not don't try to get them.

I have been uncomfortable and  
almost sleepless for 6 weeks.

with my right breast & back  
in a state of irritation causing  
a & burning or a mixture of both  
burn & itch.

It is gradually wearing out -  
I am now being treated with static

Electricity & a touch of & ray, by  
Dr. Morkon - 19 East 25th St.

He says the present application  
of & ray is entirely without success.

I hope within 60 days to hear some  
thing from the court in our case.

Are you going away for a summer  
holiday? If so when?

Yours faithfully  
J. C. Reiff

J. C. REIFF,  
20 BROAD STREET  
—  
TELEPHONE, 754 REGOR.

Aug 7/26/09

New York July 23rd 1909

JCR are you not a complainant? I do not  
understand that I am the only one.  
I thought you were in the suit & I  
would sign till I know what  
the responsibility & the consequences  
of my signature  
enclosed paper, as long to  
substitute Fred K. J. Stone applicant  
in the Quadriplex case.

I have just received the signature  
of Butler, Hillman & Hubbard  
assenting to this substitution.  
I have been working for this  
for a long time.

You should sign

Thos. A. Edison  
Solo Surviving Complainant.

This is necessary because of  
the death of Harrington.

I inclose a separate sheet  
for the acknowledgment, which  
please have signed by a Notary Public.

This does not enlarge responsibility, but  
the formality is necessary because your  
name heads the suit.

J. C. REIFF,  
20 BROAD STREET  
—  
TELEPHONE, 754 BECTON.

Harry

gives us the p New York July 27 1909  
Jus 7/28/09

Dear Edison

June 26<sup>th</sup> I read in. re.  
my asking you to assent to the  
substitution of another ally for Butler,  
Kilmer & Robbins in the Quadruplex  
Suit against the W. & P. suit.  
I am named as party <sup>in your name</sup> complainant  
in the suit against Gones the app.  
but the suit against the lower was originally  
filed <sup>in your name</sup> to preserve our rights because Case II  
the true patent of the Quad was first formally  
assigned to Gones when the suit was  
brought, the W. & P. suit was next pushed  
then because if Gones had compromised  
or we had won promptly, case II would  
have belonged to Gones.

I deemed the present a favorable moment  
to push the suit against W. & P., believing it  
would force some settlement,

I was formally made a co. complainant  
with your approval, by Judge Laconix in App  
Smith but at that time I did not wish to

After Harrington's death had a time when you were very ill

2  
J. C. REIFF,  
80 BROAD STREET  
—  
TELEPHONE, 754 RECTOR.

New York, ..... 190

disturb the other suit.

As soon as the order is Entered  
Substituting an Atty for Butty, Hildman  
& Hubbard, I propose petitioning the  
Court to be made Co-Complainant  
with you, & then I will send for your  
assent -

Nothing that I am doing will involve  
you any more than now -

I have carried by book & note all the  
legal Expenses, thus far, including printing  
Etc, with sundry payments to Lawyers,  
leaving the principal fees to await  
the final outcome.

I have paid out \$1,000, since Jan'y 1/1909.  
If I cannot prosecute these litigations  
to a finality I am financially ruined.

It is of course very unfortunate, that by  
the death of all the original parties  
in interest except you & myself, that the burden  
of carrying for this case has fallen to me, but  
I aimed to be faithful to you & to protect those  
who had trusted. I cannot live for ever & all  
my hopes was centered in securing what is due us  
by persistence - for right must win, we have been told,

Yours faithfully  
J. C. Reiff

J. G. REIFF,  
20 BROAD STREET  
—  
TELEPHONE, 754 REGTOR.

New York

Aug 28<sup>th</sup> 1909

Dear Editor, send check  
100<sup>00</sup> \$21 1909

on 28<sup>th</sup> I will owe the  
Equitable Life minimum \$482.<sup>22</sup>  
I'm now understand without more  
detail,

as it is due on Saturday, please  
let me have check on Friday, 27<sup>th</sup>.

Yours faithfully  
J. G. Reiff

As  
I have just received invitation  
to dinner at Brainerd with the  
Edison Illuminating Co. & the mess  
Thomas Edison.

I shall certainly hope to be  
there. Sorry wish I could see  
more of you.

J. C. REIFF,  
80 BROAD STREET  
—  
TELEPHONE, 754 REGTOR.

New York,

Sept 20th 1909

SEP 21 11:13

Ans 9/14/09

Dear Edison

Insurance pay day  
is coming around again.  
on 24<sup>th</sup>. I will owe the Equitable  
life \$34.<sup>50</sup>.

Please arrange so I get your  
check on 23<sup>rd</sup>.

Someday the sun will shine on me  
again - meantime my reliance  
is on a few good friends, one of  
whom is L.A.E.

Yours Truly  
J. C. Reiff

Sent Check

ask what are the prospects  
for a decision

J. C. REIFF,  
20 BROAD STREET  
TELEPHONE, 754 RECTOR.

New York

Sept 23<sup>rd</sup> 1909

My dear Edison,

We have received a temporary  
set back in the telegraph litigation.

Judge Hough affirms the master's report  
of nominal damage of 1<sup>st</sup> for infringement  
by us.

Of course it is wrong & is more annoying  
than discouraging, as there can be no  
doubt about the final outcome.

The court was misled by the master  
& evidently did not carefully read the  
record.

The decree has not yet been entered as  
the deft counsel have been absent.  
As the decision in affirming the master's  
report is in deft favor they submit the decree  
that should now be done shortly &  
then I shall serve notice of appeal.

The chief point is that on appealing must  
pay the cost of printing & as the record  
is very voluminous it will cost quite a  
sum as the deft lumbered up the  
record unnecessarily. However, I stick

Yours sincerely,  
J. C. Reiff

J. C. REIFF,  
80 BROAD STREET  
—  
TELEPHONE, 754 RESTOR.

New York, Oct 7 1909

Dear Edison

There has been another turn of the wheel in the telegraph litigation.

We have secured from Judge Thong an order to have cause on Oct 11<sup>th</sup> next for a reargument on the master's report which he lately confirmed.

Counsel feel confident we will secure <sup>reargument</sup> that as we shall show clearly the master erred, & that the Judge was misled to the master. This part of the case has been worked up by Mr. H. M. Hitchings a very able lawyer - I employed him with the full assent of Judge Putnam.

The U. S. Counsel are friends of the master, they are not only trying to put the cost on us, but allowing a fee of \$3,500 to the master, which in any event is ridiculous for 19 hearings.

The case was yesterday presented to Judge LaCombe.

It took the papers said he would not decide until Judge Thong had acted on his own order - This is all right. I made no agreement, nor did I authorize any

As to fees for the master, I agree, of course, that he is entitled to some compensation for his services, but I do not think it is fair to allow him a fee of \$3,500. I think a fee of \$1,000 would be more reasonable. I think the master is entitled to a fee of \$1,000 for his services.

J. C. REIFF,  
20 BROAD STREET  
TELEPHONE, 754 Rector.

New York,

Oct 15<sup>th</sup> 1909  
Oct 16 1909

Dear Edison,

The Judge declines  
to allow a reargument in regard  
to the Master's report.

It was Evidently too much of a  
come down to admit to himself to be  
in error.

We shall now go ahead & prepare  
the papers for appeal.

The printing Bill will be large, I  
presume somewhere between \$1,600 & \$2,000.

This decision of Judge Hough does not  
go to the merits of the case, but as he  
confirms the Master's report, the Expense  
of appeal falls on our side, <sup>finally</sup> until we win.

Judge Hazel's decision still stands  
as to the merits, i.e. that we have been  
deeply wronged, & Goetz is responsible.  
I must struggle with it somehow, for  
to stop now, ruin absolute to me.

We have proved our case & yet on the  
refusal of the Master to accept certain  
evidence as to value because app books  
were burned, this prevents us from showing  
detailed advantage in dollars from us, or

are embarrassed at a desperate stage of the case, requiring an  
appeal. Our further progress is with us, it is our master's report  
which is the only one in which we are not in error.

J. C. REIFF,  
80 BROAD STREET  
—  
TELEPHONE, 754 RECTOR.

New York,

Nov 15<sup>th</sup> 1909

RECEIVED  
NOV 16 1909

Dear Edison, I note by the  
papers yesterday you are to  
receive the Nobel prize this year  
for "Physics & Chemistry".

I most sincerely congratulate  
you. I put you in the proper class -  
I consider there is no one in all  
this broad land who has done more  
to advance the industrial interests  
of the country & benefit his  
fellow man than you have.  
It will only be a proper recognition.

Yours sincerely  
J. C. Reiff

J. C. REIFF,  
20 BROAD STREET  
—  
TELEPHONE, 754 REGON.

Confidential

New York,

1907

Dear Mr. T

Dyer & Dyer are OK but they  
they pretty high for their services

Dear Edison,

JEC

10/11/07

If I should conclude  
to advise with Dyer & Dyer for any  
purpose will it be entirely agreeable  
to you?

I know they used to do some work  
for you, & I understand they stand very  
well as lawyers.

I have not spoken to them, but was  
interested to know your estimate of  
them, & as to your personal relations  
with them.

Yours faithfully,  
J. C. Reiff

Telegraph.  
J. C. REIFF, J. C. Reiff  
20 BROAD STREET  
TELEPHONE, 754 RESTON.

New York, Dec 24 1909

Am 12/24/09

In view of Vail going in & Fish going out I think the relations

are strained. Mr Edison The unexpected illness of our active counsel & the necessity of undergoing a severe surgical operation, has tended to delay the final preparation of our appeal papers, but the counsel is improving, & the papers are now nearly ready to file. In addition in view of the radical change of ownership of the W. & A. Stock, by the sale of the Bonded Stock to the Bell Telephone Co., there may be an avenue opened to our advantage.

I have already taken steps to find the relation of parties, as I have at least no friend in the near out of the way. I. Waterbury, Pres. of Washington Gas Co. I am to have an interview with him next week.

Among other things I wish to find out definitely the personal relations between Vail & Fish. If you know or can learn, please let me know. I expect to get some rest next week. It is rather a delicate question.

It may be worth a many times a happy and pleasant message.

**1909. West Orange Laboratory (D-09-45)**

This folder contains correspondence and other documents relating to the operation of the West Orange laboratory. Included are items regarding drilling equipment, other instruments, and chemicals and supplies, as well as letters from suppliers acknowledging the receipt of Edison's notes in lieu of immediate payment.

Approximately 10 percent of the documents have been selected. The items not selected include statements, price quotations, acknowledgments and receipts, bills of lading, and routine correspondence pertaining to supplies and equipment.

TAE - on dr. 11s

THE DIAMOND DRILL CARBON CO.

DIRECT RECEIVERS OF CARBON (BLACK DIAMONDS)

BRIDGE ARCH 17, (FRANKFORT STREET)

NEW YORK, N. Y.

Jan 19/09

CABLE ADDRESS: AMSTERDAM.  
CABLE CODE:  
A. B. G. THE DIAMOND DRILL CARBON CO.

New York, Jan. 15th, 1909.

Mr. Thos. A. Edison,

Orange, N.J.

Dear Sir :-

We beg to advise you that we have this day received a new shipment of carbon on which we quote the following:

1 Karat — \$40. per kt.

1½ " — 50. " "

1½ & 1½ kts. 60. " "

2 to 3 " 70. " "

Your attention is respectfully called to the fact that while these prices are positively known by us to be from ten to fifteen dollars a Karat lower than others are selling these same goods for, we wish particularly to impress upon you that they are equal in every particular to the very best that can be had and, in proof, we should gladly submit for your approval a parcel of such sizes as you may feel interested in.

Trusting to be favored with your future orders, we are

Very truly yours,

THE DIAMOND DRILL CARBON CO.

*Cartney*

*I have had such bad luck  
with Diamonds for drilling that  
I no longer use them and did  
just as well with a Keystone  
drill & carbide bit. I am not 1/3rd the  
cost*

TAE-writing

Feb. 6 - 09

Dodge

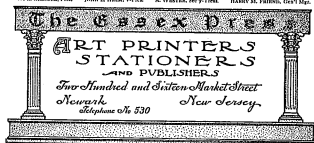
Rogers not here, better send the  
man over who is to run the machines  
so he can follow up the changes

~~answer~~ — I suppose Rogers is  
sick — answer

Edison

Typing phone 10 a.m. Sam

W. R. GILMORE, Pres. JOHN E. HIGGS, V-Pres. A. WINTER, Sec'y-Treas. HARRY M. FORDEN, Gen'l Mgr.



February 23d, 1909.

Mr. ~~Edward~~ Brady,  
Edison Laboratory,  
Orange, N. J.  
Dear Sir:-

We will be pleased to furnish

24 bill heads, form 10, not padded, for \$4.50.

104 Form 1, Daily Time Tickets,

padded in 100's, for \$12.50. Subsequent lots  
\$11.50.

Hoping these prices will be  
satisfactory, and we shall be favored with your  
order, we remain,

Very truly yours,

THE ESSEX PRESS,  
*H. M. Forden*  
GEN'L MGR.

HMF/AMS

ADDRESS ALL COMMUNICATIONS TO THE COMPANY.

Manufacturers, of

*Open Hearth Steel Castings.*

D-D

Chester, Pa., March 9, 1909.

Mr. H.F. Miller, Secretary,  
Mr. Thomas A. Edison,  
Orange, N.J.

Dear Sir

We beg to acknowledge receipt of your favor of the 8th inst., and note that you have forwarded notes mentioned to Mr. Edison, at Florida, for his signature, and trust the same will arrive shortly.

Yours very truly,

FEDERAL STEEL FOUNDRY CO.

## DECHETARY & TREATMENT

*Lab. Gold*

ADDRESS ALL LETTERS TO  
STATION D

*Paul S. Reeves & Son,*  
3 *Tobacco Smoking Works,*  
*1415-25 Catherine Street.*

*Philadelphia,* Dec 22/09

Labo~~r~~atory of Thomas A. Edison,  
Orange, N. J.

Gentlemen;

We have your letter of the 19th by Mr. Miller and observe no te has been sent South to Mr. Edison for his signature. We hope this will come through quickly. As stated in our letter, we wanted to use this paper Saturday. We have some heavy metal bills to pay this week and we hope you will be able to let us have it at the first possible moment.

Yours truly,

*Paul S. Reeves & Son*

*Photo. Co.*

## Chamber of Commerce of the State of New York

Founded April 5th, 1788, Reincorporated by George III., March 13th, 1778,  
Re-Incorporated by the State of New York, April 13th, 1784.

J. EDWARD REMOND, President.

Vice-Presidents.

CORNELIUS M. BLISS,	JOSEPH H. CHEATE,
WILLIAM BUTLER DUNGAN,	GUSTAV H. SCHWAB,
STEP LOW,	GEORGE F. SEWARD,
JOHN CHERRY BROWN,	CLEVELAND H. DODGE,
WILLIAM BAYARD CUTTING,	JAMES A. HILL,
	GEORGE F. BAER,

WILLIAM H. FOSBER, Treasurer.  
BEREN R. FRATT, Secretary.

New York, 24th March 1909.

Dear Sir:

I beg you to accept our thanks for your letter of March 22nd, with enclosures and information concerning the samples of sapphire handed to you some time since.

We have written to Mr. P. J. Monahan of Clermont, Australia, and suggested that he communicate with the National Phonograph Company direct.

Yours very truly,

*Chas. I. Gwynne*

H. F. Miller, Esq., Secretary  
Laboratory of Thomas A. Edison,  
Orange, New Jersey.

CTG/BPH

*Ab G. H.*  
CABLE ADDRESS: NORBOM  
WESTERN UNION CODE

DEMOLA BUILDING  
N. W. COR. 11th AND MARKET STS.

**THE NORBOM ENGINEERING CO.**

INCORPORATED

ENGINEERS AND CONTRACTORS

PHILADELPHIA, PA. March 30, 1909.

Mr. H. F. Miller,  
Orange, N.J.

*Answered  
April 2, 1909*

*RECEIVED*

Dear Sir:-

Referring to our invoice of February 27th for account of Thomas A. Edison, and agreement to accept three and four months note thirty days after date of invoice, we hope it will be convenient for you to let us have these by Thursday, as we have a number of heavy obligations to meet, and would like to discount the paper on that date.

Yours very truly,

THE NORBOM ENGINEERING CO.

*Louis Honselev*

Ass't Treasurer.

TT-A

Lab. 4. 16

Paul T. Reeves & Son

Tubal Smelting Works

No. 2415 to 2425 Callahan Street

Philadelphia MAR 30 1909 100

Mr. Thos. A. Edison

Orange

N.J.

Dear Sir:

We are in receipt of  
your favor enclosing Two Notes for  
Four hundred & Sixty seven & 25/100 Dollars <sup>25</sup> Two hundred  
Sixty nine & 1/100 Dollars  
in settlement of February account  
for which we are obliged and soliciting your  
further orders remain.

Yours Truly,

Paul T. Reeves & Son

By W. H. Hamaker

1909

SOLE AGENTS, LONDON, ENGLAND.  
 ALL THE NAPHTHALS OF ALL GRADES,  
 ALL THE NAPHTHALS, DINITRO-NAPHTHALS,  
 AND OTHER NITRO COMPOUNDS.  
 ALL THE NITRO-BENZOL, NITRO-ACID,  
 CARBONIC ACID, CHLORINE, SULFUR, CRUDE,  
 SULFONIC ACID, AND ALL OTHERS,  
 AND ALL THE OILS, TAR AND PITCH.



**BARRETT  
 MANUFACTURING  
 Co.**

CABLE ADDRESS, "NENZOL"  
 A. B. C. CODE USED.

**Chemical  
 Department.**

**CAND-TITLE-BUILDING-PHILADELPHIA.  
 FRANKFORD, PHILADELPHIA.**

*Ans 5/6*

*We want very pure Benzol to make Dinitro Benzol. If you have a good quality of Dinitrobenzol, send like samples. If you get the right quality, we will be glad to order a large quantity for you.*

Mr. J. A. Edson,  
 Orange, N.J.

We have your favor of the 3rd inst. in regard to Nitro-Benzol, Naphthalene and Nitro-Naphthalene. We are glad to advise that the only products which are at present manufactured here are Benzol and Naphthalene. The latter article, however, is not for nitration, as we presume you anticipate to so treat it. The commercial article used as a common destroyer of insects is the C.P. grade in the article you are inquiring for. We beg to quote you this product, in 100 gal. iron drums, 22¢ a gallon, Feb. Philada., delivered at \$1.00 each and returnable at your expense. We should be pleased to send you a sample, if you will advise us the quantity which is necessary for your examination of it.

Respectfully yours,

BARRETT MANUFACTURING CO.

*Dr. J. A. Edson* Asst. Mgr.

*Prady*

906 writing chemicals

PURE BENZOL, TOLUOL, XYLOL,  
COAL TAR NAPHTHES OF ALL GRADES,  
NITRO-BENZOL, DINITRO-BENZOL,  
AND OTHER NITRO COMPOUNDS.

OIL OF NITRANE, NITRIC ACID,  
CARBOLIC ACID-CRYSTALS, LIQUID, CRUDE,  
NAPHTHALINE IN ALL FORMS,  
CREOSOTE OIL, TAR AND PITCH.



BARRETT  
MANUFACTURING  
Co.

CABLE ADDRESS, "BENDOL"  
A. B. C. CODE USED.

Chemical  
Department.

LAND-TITLE BUILDING, PHILADELPHIA.  
FRANKFORD, PHILADELPHIA.

I am after Benzene  
Acenaphthene, Diphenyl, Fluorene  
June 2, 1909.

Phenanthrene & Retene + want the

Laboratory of Thomas A. Edison,

Orange, N.J.

Dear Sirs:

We have your favor of the 1st inst., and note your request for  
the fractions obtained in the first distillation of coal tar,

We may say, for your information, that most of our works take off but  
two fractions in their distillation, the first being the light oil, or that  
which is of a lighter gravity than water, <sup>for men</sup> the balance being taken off  
as creosote or heavy oil. A small amount of coal tar at present is being  
distilled with three fractions of the oil; in these cases, the first part of  
the heavy oil is collected separately. Kindly advise us whether these are  
the oils of which you wish samples. You must bear in mind in this work that  
these oils would vary considerably, depending upon the tar they were dis-  
tilled from, and this would depend on the works from which the oils were ob-  
tained. Therefore, a sample of these oils obtained from us at this time  
might not represent the materials you would obtain at some future date, if  
purchasing in large quantities. We await your further advice before send-  
ing you any of these products.

Respectfully yours,

BARRETT MANUFACTURING CO.

*Sto. Payne* Asst. Mgr.

*P. L. Gould*  
REDFORD HONOLULU, H.O.T.  
LIEBOW'S B.A.S.C. CO. INC.



ALL AGREEMENTS  
MADE CONTINGENT UPON  
STRIKES, FIRE, ACCIDENTS OR  
CAUSES BEYOND OUR CONTROL.  
QUOTATIONS SUBJECT TO  
CHANGE WITHOUT NOTICE.

## TRAYLOR ENGINEERING COMPANY,

(INCORPORATED)

MANUFACTURERS, CONTRACTORS AND CONSULTING ENGINEERS.

WORKS AT ALLENTOWN, PA.

NEW YORK OFFICE, 2 RECTOR STREET

IMPORTANT.

Address Your Reply to the Company  
and refer to the Writer.

ALLENTOWN, PA. June 2nd/09.

Mr. Thomas A. Edison,  
Orange, N.J.

Dear Sir:-

We acknowledge receipt of note dated May 22nd  
due August 20th-09 for \$1028.97 and note dated May 22nd  
due Sept. 20th-09 for \$1034.04, same to take care of  
invoices of April 15th and 22nd and interest on notes  
at the rate of 6% per annum until the maturity of same.

We have credited this remittance to your account  
with thanks and appreciate very much your prompt response.

Very truly,

TRAYLOR ENGINEERING COMPANY.

*J. B. Battersby*  
Assistant Treasurer.

HB FW

CABLE ADDRESS "TRAYLORIAN"

COMPLETE DESIGNS  
FOR DOMESTIC OR  
FOREIGN INSTALLATION.

CLANDE HILLS  
ORE AND STONE CRUSHING PLANTS  
FUEL & COAL BRIQUETTING, SUGAR  
& CEMENT MACHINERY, ETC.  
HAWKES POWER & HEATING BOILERS  
COMPLETE SMELTING AND  
CONCENTRATING EQUIPMENTS, ETC.  
COMPLETE ERECTED PLANTS  
A SPECIALTY.

CONTRACTS TO BE VALID MUST BEAR THE SIGNATURE OF AN OFFICER.

PURE BENZOL, TOLUOL, XYLOL,  
COAL TAR NAPHTHAS OF ALL GRADES,  
NITRO-BENZOL, DINITRO-BENZOL,  
AND OTHER NITRO COMPOUNDS.

OIL OF NITRANE, NITRIC ACID,  
CARBOLIC ACID-CRYSTALS, LIQUID, CRUDE,  
NAPHTHALINE IN ALL FORMS,  
CREOSOTE OIL, TAR AND PITCH.



**BARRETT  
MANUFACTURING  
Co.**

**Chemical  
Department.**

LAND-TITLE BUILDING, PHILADELPHIA,  
FRANKFORD, PHILADELPHIA.

June 7, 1909.

Laboratory of Thomas A. Edison,  
Orange, N.J.

Dear Sirs:

We beg to acknowledge receipt of yours of the 4th inst., explaining the substances which Mr. Edison is anxious to obtain in order to do further work upon.

While these substances may be in the tar and the fractions of oil obtained from it, yet the quantities are probably small. We do not believe that any work has been done upon American oils to show the various amounts present in them, and could give you no idea along this line. Some of these products are high boiling ones, and would come principally from very high boiling Creosote Oils, more properly called Anthracene Oils. A very small amount of this oil is obtained in this country, and our branch at Johnstown, Pa., probably has the heaviest oil of any. We should be pleased to send you whatever quantity Mr. Edison may need of our Light Oil and Creosote Oil, and suggest that you obtain the heavy Anthracene Oil from our Johnstown branch. Kindly advise whether you wish 20 gallons each of Light Oil and Creosote Oil, as mentioned in your original letter.

Respectfully yours,

BARRETT MANUFACTURING CO.

Asst. Mgr.

*Wm. Jayne*  
If just too much trouble please send 20 gals  
on the light oil & creosote oil & anthracene oil -  
I certainly ought to find what I want in  
these for 2



HOOVER ELECTROCHEMICAL COMPANY  
40 WALL STREET  
NEW YORK

December 10, 1909

Mr Clarence Churchill  
10 Fifth Ave  
New York City

Dear Sir

Confirming the writer's telephone conversation with you yesterday, we beg to advise that we do not at present make a definite price on Chlorine Gas, but we can say that we are making large quantities of the Gas, and that we could deliver it to outside parties under satisfactory conditions, and if we so delivered Gas, we would not charge over 3¢ per lb. for it.

This limited figure is not meant to hold for an indefinitely long period of time.

Very truly yours,

HOOVER ELECTROCHEMICAL COMPANY,

CNL-IL

Per E. J. Lansing

Acknowledged  
Dec 11/09

Re: Rector

*Edison*

*Reference to Clarence Churchill*

*Wright*

Sel'at.

9:30.

Telephone R Abrogant -

To send over <sup>at once</sup> 2 Carboys of

Nickel Sulphate of the  
same strength <sup>a quality</sup> you use  
when precipitating  
also a small drum of  
Soda in solid form that is  
used for precipitating -

Edison

~~250 lb. drums~~

~~250 lb~~ Don't you find a small  
drum to put 20 pounds  
in only want 20  
pounds or so now

Σ

Ed-Hand

RCC Group

Send me the numbers  
of the batches you  
booked for various periods  
after precipitating

5

1916

Wreck with with tonight

Quoted on two

Long Litchie Carb

Same as last  
15<sup>th</sup>

for May delivery

Edison

Same to Ragsdale

**DOCUMENT FILE SERIES**

**1910**

#### **1910. Automobile - General (D-10-01)**

This folder contains correspondence and other documents relating to the design and operation of automobiles and the use of storage batteries in electric vehicles. Among the items for 1910 are documents pertaining to Edison's research into the number of electric vehicles on the road and the experience of their owners with lead storage batteries. Other letters deal with Edison's promotion of trucks using his storage battery. At the end of the folder is an undated draft in Edison's hand of a circular for an "Electric Automobile with the New Edison Battery." Among the correspondents are Frank L. Dyer, vice president and general counsel of the Edison Storage Battery Co., and William G. Bee, sales manager. There are also numerous letters by automobile manufacturers such as Babcock Electric Carriage Co., Electric Vehicle Co., Studebaker Automobile Co., and Waverly Co.; and by individual owners of electric vehicles. Invoices and account sheets that pertain to the upkeep of Edison's automobiles can be found in D-10-42 (Glenmont).

#### **1910. Automobile - Anderson Carriage Company (D-10-02)**

This folder contains correspondence and other documents relating to the use of Edison storage batteries in electric vehicles made by the Anderson Carriage Co. in Detroit, Michigan. Included are notes by Edison regarding the weight and efficiency of the vehicles, as well as correspondence with William C. Anderson, president of the company, about the outfit, performance, and promotion of its Detroit Electric automobile.

#### **1910. Automobile - Lansden Company (D-10-03)**

This folder contains correspondence and other documents relating to the business of the Lansden Co., a manufacturer of electric wagons in which Edison possessed a controlling interest. Included is an audit report prepared by the accounting firm of Lybrand, Ross Bros. & Montgomery. Also included are memoranda and financial statements and a summary of orders completed and received. In addition there are numerous documents pertaining to the promotion of Lansden vehicles. At the end of the folder is an undated draft in Edison's hand of a promotional article regarding the use of the Edison storage battery in Lansden wagons. Among the correspondents are Frank L. Dyer, president of the National Phonograph Co. and vice president of the Edison Storage Battery Co.; Leonard C. McChesney, head of the Advertising Department; and John M. Lansden, Jr., and other officials of the Lansden Co.

#### **1910. Battery - Primary (D-10-04)**

This folder contains correspondence and other documents relating to the primary batteries produced by the Edison Manufacturing Co. The items for 1910 pertain to the manufacture and design of batteries and to sales arrangements with licensed dealers and agencies. Among the correspondents is Frank L. Dyer, vice president of the Edison Manufacturing Co.

#### **1910. Battery - Storage - General (D-10-05)**

This folder contains correspondence and other documents relating to the commercial and technical development of Edison's alkaline storage battery. Among the documents for 1910 are numerous items in Edison's hand, including a 20-page draft letter to Samuel Insull urging him to promote the battery among "our central station people" and a memorandum regarding the proposed guarantee on his battery. There are also documents pertaining to the manufacture of batteries and the finances of the Edison Storage Battery Co., along with letters concerning the use of the battery in submarines, buses, streetcars, railroads, and other applications. Some of the letters refer to the proposed use of the battery with the Klaxon automobile horn invented by Miller Reese Hutchison.

Also included are numerous unsolicited requests for information about the battery, some with marginal notes by Edison. At the end of the folder is an undated typescript containing "instructions for the proper care of Edison storage batteries" and comparing the Edison battery to the Exide battery manufactured by the Electric Storage Battery Co. Among the correspondents are Frank L. Dyer, vice president and general counsel of the Edison Storage Battery Co.; William G. Bee, sales manager; and business associates Ralph H. Beach, Cornelius J. Field, Miller Reese Hutchison, Samuel Insull, Frank J. Sprague, and Walter E. Holland.

**1910. Battery - Storage - Federal Storage Battery  
Car Company (D-10-06)**

This folder contains correspondence and other documents relating to the technical and commercial development of battery-powered streetcars by Ralph H. Beach and his Federal Storage Battery Car Co. Included is correspondence by Edison, Beach, and Frank L. Dyer, vice president and general counsel of the Edison Storage Battery Co., pertaining to streetcar design, performance, manufacture, sales, and promotion. Some of the letters express Edison's concern about the exaggerated claims made by Beach regarding the life of the Edison storage battery.

**1910. Battery - Storage - Foreign - General (D-10-07)**

This folder contains correspondence and other documents relating to the patenting, manufacture, and sale of Edison storage batteries in countries other than the United States and Germany. Some of the letters refer to the marketing of storage batteries and the promotion of the streetcar business in Japan. There is also a reference to the battery business of Edison's former secretary, Alfred O. Tate, in Toronto, Canada. Among the correspondents are Herman E. Dick, John T. Morrow, H. F. Parshall, J. P. Morgan & Co. of New York, and Morgan, Grenfell & Co. of London. Also included is correspondence with W. R. Grace & Co. and Agar, Cross & Co. regarding sales rights for South America.

**1910. Battery - Storage - Foreign - Bergmann, Sigmund (D-10-08)**

This folder contains correspondence and other documents relating to the manufacture and sale of Edison storage batteries by Sigmund Bergmann and his Deutsche Edison-Accumulatoren-Co. Included are items pertaining to machinery and material for the batteries, the outfitting of the Bergmann Electrical Works, the finances of the Deutsche Edison-Accumulatoren-Co., and the use of storage batteries in streetcars. Among the correspondents are Frank L. Dyer, vice president of the Edison Storage Battery Co., and O. A. Rogers, who was sent to Berlin to assist Bergmann in preparing machine tools for the improved battery.

**1910. Battery - Storage - Foreign - Moyes, John W. (D-10-09)**

This folder contains correspondence and other documents relating to John W. Moyes of Toronto, Canada, and his negotiations with the Edison Storage Battery Co. for the manufacture and sale of storage batteries in Canada. Included are versions of an agreement between Moyes and Edison; correspondence between Moyes and Frank L. Dyer, vice president of the Edison Storage Battery Co.; and items pertaining to Moyes's interest in obtaining the Canadian rights to Edison's cement patents.

**1910. Battery - Storage - Metals (D-10-10)**

This folder contains correspondence and other documents relating to Edison's interest in obtaining metals such as lithium, cobalt, and bismuth for possible use in his alkaline storage battery.

The correspondents include American Smelting and Refining Co., E. Schaaf-Regelman, and Merck & Co. There are also letters from individuals possessing information about sources and prices of bismuth. Some of the letters contain marginal notations by Edison.

#### **1910. Battery - Storage - Promotional (D-10-11)**

This folder contains correspondence and other documents relating to the promotion of Edison storage batteries. Included are "talking points" and other promotional descriptions, many in Edison's hand; advertisements printed for the Edison Storage Battery Co.; and material regarding an "ideal tour" up Mount Washington in New Hampshire made by two automobiles equipped with Edison storage batteries. Also included are items concerning the plans of advertising executive, Converse D. Marsh, to promote the use of Edison batteries in cooperation with electrical manufacturers and central stations. Among the correspondents are Frank L. Dyer, vice president and general counsel of the Edison Storage Battery Co.; Leonard C. McChesney, head of the Advertising Department; and William G. Bee, sales manager.

#### **1910. Battery - Storage - Tests (D-10-12) [not selected]**

This folder contains reports and memoranda concerning tests made on Edison storage batteries. Included are requests for chemical analyses of solutions along with reports of road tests performed with electric vehicles. Most of the laboratory memoranda are addressed to Ignacy Goldstein, laboratory employee and chemist, and concern the composition and specific gravity of electrolyte solutions. The road test reports contain information on equipment, routes, and the performance of cells.

#### **1910. Cement (D-10-13)**

This folder contains correspondence and other documents relating to the business of the Edison Portland Cement Co. and to the manufacture and sale of cement. Included are letters concerning competitive bids, litigation, and efforts to cooperate with other cement manufacturers in controlling prices and supply. There are also items regarding negotiations with John W. Moyes to manufacture cement in Canada and a letter announcing the death of the company's president, Robert H. Thompson. Among the correspondents are Walter S. Mallory, vice president (later president) of the Edison Portland Cement Co.; Frank L. Dyer, general counsel; and E. Meyer, manager of sales. Related material can be found in D-10-09 (Battery, Storage - Foreign - Moyes, John W.).

#### **1910. Cement House (D-10-14)**

This folder contains correspondence relating to the widely publicized development of Edison's poured concrete house. Much of the material consists of unsolicited inquiries regarding the unique nature, quick construction, and low cost of the projected house. Also included are requests to view or display Edison's one-quarter scale model as well as correspondence concerning concrete construction generally. Many of the unsolicited letters contain Edison marginalia, usually indicating that a prepared circular be sent in response. Related material can be found in D-10-32 (Edison, T.A. - Unsolicited Correspondence - Business - Cement House).

#### **1910. Copyright (D-10-15)**

This folder contains correspondence and other documents relating to copyright matters involving Edison and his companies. Included are items pertaining to copyright legislation, film scenarios, and recordings. There are also letters concerning a copyright dispute involving the title

of the film *In the Nick of Time* produced by the Edison Manufacturing Co.

**1910. Edison, T.A. - General (D-10-16)**

This folder contains correspondence and other documents relating to a variety of subjects. Included are documents that deal with more than one subject or that do not fall under the main subject categories in the Document File. Among the items for 1910 are general expense reports for the Edison companies; minutes of the companies' centralized Manufacturing Committee; and a five-page report sent to Edison while he was vacationing in Fort Myers, Florida. One letter acknowledges Edison's donation toward the erection of a statue honoring the French author, the Comte de Villiers de l'Isle-Adam. Another suggests a meeting between Edison and Wilbur Wright. There is also a letter from Edison's sister-in-law, Alice Stillwell Holzer, announcing the death of her husband, William Holzer. In addition, there are items pertaining to Edison's interest in a hearing aid called the "acousticon" and documents relating to his attendance at the convention of the Association of Edison Illuminating Companies. Among the correspondents are Booker T. Washington, Hudson Maxim, and Charles M. Schwab. There are also letters from longtime Edison associates, including Herman E. Dick, William K. L. Dickson, William J. Hammer, Edward H. Johnson, Thomas C. Martin, James Ricalton, and Charles P. Steinmetz. Related material can be found in D-10-13 (Cement).

**1910. Edison, T.A. - Articles (D-10-17)**

This folder contains correspondence requesting Edison to write articles, correspondence relating to books and articles about Edison and his inventions, and letters from journalists seeking to interview Edison or soliciting his statements for publication. Among the items for 1910 are numerous letters pertaining to the two-volume biography, *Edison: His Life and Inventions*, by Frank L. Dyer and Thomas C. Martin. Also included are letters regarding a proposed biography of Edison for young readers, items concerning the sale of a notebook of escapement drawings executed by Edison in 1872, correspondence from Hudson Maxim and Samuel Insull, and a draft by Edison of an article on "the flexible wealth of the United States."

**1910. Edison, T.A. - Book and Journal Orders  
(D-10-18)**

This folder contains correspondence and other documents relating to the ordering of books and journals. Included are renewals for Edison's journal subscriptions, as well as book and magazine orders for members of the Edison family. Among the documents for 1910 are items concerning works on religion and spiritualism and on electric railways.

**1910. Edison, T.A. - Clubs and Societies (D-10-19)**

This folder contains correspondence relating to Edison's membership and activities in social clubs and professional societies. Among the documents for 1910 are several letters from the American Institute of Electrical Engineers, to which Edison donated a diary by Samuel F. B. Morse. There are also several invitations to the annual banquet of the Ohio Society of New York, which Edison declined on account of his deafness. In addition, there are letters from the National Electric Light Association, the Committee of One Hundred of the American Association for the Advancement of Science, and other professional societies; automobile and booster clubs; and religious, civic, and philanthropic organizations. Some of the items contain marginal notes by Edison.

#### 1910. Edison, T.A. - Employment (D-10-20)

This folder contains correspondence from or about employees and prospective employees. There are also letters soliciting Edison's opinion regarding former employees seeking employment elsewhere. Most of the correspondence consists of requests for employment at the West Orange laboratory, some in answer to newspaper advertisements. Among the items for 1910 are documents pertaining to the employment of Sydney W. Ashe, Donald M. Bliss, Newman H. Holand, and violinist Arturo Nutini. There are also letters concerning the estates of Charles Batchelor and John Kruesi.

#### 1910. Edison, T.A. - Family (D-10-21)

This folder contains correspondence and other documents relating to the health, finances, and activities of Mina Miller Edison and other family members. Among the items for 1910 are letters pertaining to the financial difficulties of William Leslie Edison, the legal problems of his Edison Auto Accessories Co., the finances of Thomas A. Edison, Jr., the many charitable and household activities of Mina Miller Edison, and the redemption of her bonds in the Edison Electric Illuminating Co. and Edison Phonograph Works. There is also material concerning an automobile accident involving Charles Edison and the expenses for a summer camp attended by Theodore Edison.

#### 1910. Edison, T.A. - Financial (D-10-22) [not selected]

This folder contains routine correspondence and other documents relating to Edison's personal investments and other financial interests. Included are letters pertaining to bond transactions; the dissolution of the Ott Manufacturing Co.; and Edison's holdings in the Edison Portland Cement Co. and its subsidiary, the Pohatcong Railroad Co. There are also items concerning the Burroughs Adding Machine Co. and the Edison Chemical Works.

#### 1910. Edison, T.A. - Insurance (D-10-23) [not selected]

This folder contains routine correspondence relating to insurance policies held by Edison and his companies. Included are requests to inspect buildings, inquiries concerning Edison's life insurance policy, and notice of a \$10,000 settlement paid for fire loss at Edison's plant at Silver Lake, New Jersey.

#### 1910. Edison, T.A. - Name Use (D-10-24)

This folder contains correspondence and other documents relating to the use of Edison's name, whether authorized or unauthorized, for advertising, trademark, or other purposes. Among the items for 1910 are several letters from detective Joseph F. McCoy regarding plans to establish a company to manufacture Edison's Polyform. Also included are letters pertaining to storage battery trademarks and to a hearing aid called the Edison Electric Ear. Related documents can be found in the Legal Department Records. Items concerning the use of the name "Thomas A. Edison, Jr." can be found in D-10-21 (Edison, T.A. - Family).

#### 1910. Edison, T.A. - Real Estate - General (D-10-25)

This folder contains correspondence and other documents relating to the purchase, rental, and sale of land and buildings. Among the items for 1910 are letters by Frank L. Dyer, general counsel of the Legal Department, pertaining to the land on which the Bronx studio was built and to the phonograph plant at Glen Ridge, New Jersey.

**1910. Edison, T.A. - Real Estate - Factory Location  
(D-10-26) [not selected]**

This folder contains correspondence that Edison received in response to newspaper reports that he was seeking a new location for the manufacture of his storage batteries, electric vehicles, or electric streetcars. A few items contain perfunctory notations by Edison indicating that those reports were incorrect.

**1910. Edison, T. A. - Religion and Spiritualism (D-10-27)**

This folder contains correspondence and other documents relating to Edison's interest in religion and spiritualism. Included are letters from and pertaining to the spiritualist, Bert Reese, as well as unsolicited responses to published statements made by Edison denying the immortality of the soul and expressing other religious opinions.

**1910. Edison, T.A. - Unsolicited Correspondence -  
Advice - General (D-10-28)**

This folder contains routine correspondence suggesting improvements in Edison's inventions, asking him for advice on technical matters, or requesting his assistance in improving or promoting inventions. Also included are unsolicited letters from inventors about their work.

**1910. Edison, T.A. - Unsolicited Correspondence -  
Advice - Aviation (D-10-29) [not selected]**

This folder contains unsolicited correspondence relating to technological developments in aviation and aerial navigation. Many of the letters were inspired by newspaper reports that Edison was interested in those fields. Some of the items contain Edison marginalia refuting the newspaper accounts.

**1910. Unsolicited Correspondence - Autograph and  
Photograph Requests (D-10-30) [not selected]**

This folder contains routine correspondence requesting Edison's autograph or asking for his photograph. Some of the items contain perfunctory Edison marginalia granting or refusing those requests.

**1910. Edison, T.A. - Unsolicited Correspondence -  
Business - General (D-10-31)**

This folder contains routine correspondence from individuals or companies requesting agencies for Edison's inventions or seeking to do business with Edison. Related material can be found in D-10-07 (Battery - Storage - Foreign - General).

**1910. Edison, T.A. - Unsolicited Correspondence -  
Business - Cement House (D-10-32) [not selected]**

This folder contains routine correspondence from individuals requesting agencies for the construction and sale of Edison's concrete house. Some of the items contain perfunctory Edison marginalia.

**1910. Edison, T.A. - Unsolicited Correspondence -  
Deafness (D-10-33)**

This folder contains correspondence relating to Edison's deafness and to devices for the hearing impaired. Included are requests for Edison's opinion of existing hearing aids as well as inquiries concerning his plans to invent such a device.

**1910. Edison, T.A. - Unsolicited Correspondence - Foreign Language (D-10-34)  
[not selected]**

This folder contains untranslated letters to Edison. Foreign-language documents accompanied by translations or English-language summaries can be found in other "Edison, T.A. - Unsolicited Correspondence" folders and in the appropriate subject folders.

**1910. Edison, T.A. - Unsolicited Correspondence -  
Holiday Greetings (D-10-35) [not selected]**

This folder contains holiday greetings received by Edison from friends, family, acquaintances, associates, and others.

**1910. Edison, T.A. - Unsolicited Correspondence -  
Personal (D-10-36)**

This folder contains routine personal requests and fan mail. Included are letters asking Edison for educational advice, personal information, information on lightning rods and x-rays, charitable contributions, loans, and other favors.

**1910. Edison, T.A. - Visitors (D-10-37) [not selected]**

This folder contains routine letters of introduction and routine requests to visit Edison or tour his West Orange laboratory. Substantive letters from individuals who visited the laboratory or company shops on business can be found in the appropriate subject folders. Some of the items contain perfunctory marginalia by Edison, granting or refusing requests. Among the documents for 1910 is a formal letter of appreciation from the Honorary Commercial Commissioners of Japan, who visited the United States in 1909.

**1910. Edison Crushing Roll Company (D-10-38)**

This folder contains correspondence and other documents relating to the business of the Edison Crushing Roll Co., which licensed and installed Edison's crushing rolls and collected royalties for their use. Included are statements of expenses incurred and royalties due, as well as correspondence regarding blueprints, patterns, licenses, and inspections.

**1910. Edison Manufacturing Company (D-10-39)**

This folder contains correspondence and other documents relating to the business of the Edison Manufacturing Co. Among the documents for 1910 are items pertaining to corporate taxes, advertising, material for primary batteries, and a contract with Nelson Goodyear. Also included are comparative statements of general expenses for 1909 and 1910.

#### **1910. Exhibitions (D-10-40)**

This folder contains correspondence and other documents concerning electrical and industrial exhibitions. Among the documents for 1910 are items pertaining to the Ohio Valley Exhibition and the Boston Mechanics Exposition, as well as the Panama-Pacific International Exposition planned for San Francisco in 1915. There are also items regarding the Japan British Exhibition in London and the Travel Exhibition in Glasgow.

#### **1910. Fort Myers (D-10-41)**

This folder contains correspondence and other documents relating to the maintenance of Edison's home and property at Fort Myers, Florida. Among the items for 1910 are letters regarding remodeling of the house, storm damage, plantings, and materials ordered. There are also letters concerning travel plans and electrical supplies ordered from the West Orange laboratory by Frederick P. Ott in Florida.

#### **1910. Glenmont (D-10-42) [not selected]**

This folder contains correspondence and other documents relating to the furnishing and maintenance of Glenmont, Edison's home in Llewellyn Park. The items for 1910 consist primarily of bills, statements, receipts, and account sheets itemizing household expenditures in the name of Mina Miller Edison or her husband. Included are statements of account detailing automobile parts and repairs; cost estimates on remodeling work proposed for the house; and numerous bills for coal.

#### **1910. Legal Department (D-10-43)**

This folder contains correspondence and other documents relating to the activities of the Legal Department, a centralized office for the consideration of legal matters involving the Edison companies. Included are items that pertain to litigation or to the organization of companies, as well as items that address general concerns of corporate structure and financial and legal responsibility. Most of the documents for 1910 consist of letters and memoranda to or from Frank L. Dyer, general counsel of the Legal Department, concerning settlements with injured employees, the proposed annexation of the Silver Lake section of Belleville to Newark, the organization of an engineering department at the West Orange laboratory, and Dyer's personal investment in the Condensite Co. of America.

#### **1910. Mining (D-10-44)**

This folder contains correspondence and other documents relating to mining and ore milling. Included are items pertaining to mining property in Canada and mining equipment in Australia, as well as correspondence enclosing ore samples or inquiring about Edison's interest in ore milling, mines, and ores. Other documents deal with prospecting work paid for by Edison and the progress of litigation against the Allis-Chalmers Co., which Edison was suing for infringement of his crushing roll patent. One letter concerns the plant at Dunderland, Norway, constructed by the Edison Ore Milling Syndicate, Ltd.

#### **1910. Motion Pictures - General (D-10-45)**

This folder contains correspondence and other documents relating to the production and commercial development of motion picture films and the manufacture of projectors. Included are items concerning photographic and production quality, advertising, sales, film distribution, and the activities of exhibitors. Among the documents for 1910 are letters pertaining to the employment of

actress Pilar Morin and others at the Edison studio in the Bronx, the facilities of the studio, and foreign markets for films. Among the correspondents are Frank L. Dyer, vice president of the Edison Manufacturing Co.; George F. Scull, assistant to the vice president; and Horace G. Plimpton, manager of negative production.

#### **1910. Motion Pictures - Censorship (D-10-46)**

This folder contains correspondence and other documents relating to the activities of the National Board of Censorship of Motion Pictures. Included are letters between Charles Sprague Smith, executive chairman of the National Board, and Frank L. Dyer, vice president of the Edison Manufacturing Co., concerning censorship activities, the exhibition of films on Sundays, and the use of motion pictures for educational purposes. There are also numerous reports that "pass," "condemn," or require modifications in individual films, along with a statement of receipts and disbursements for the period June 1909-May 1910.

#### **1910. Motion Pictures - Experimental (D-10-47)**

This folder contains correspondence and other documents relating to the technical development of films, cameras, and projectors. Included are items pertaining to the experimental work on color photography contracted to Charles L. Brasseur; other experimental work conducted at the West Orange laboratory by Willard C. Greene; and the development of the "Household Projecting Kinetoscope," a small projector for home use. There are also assessments of improvements submitted to the Edison Manufacturing Co. by outsiders, including evaluations of the color photographic process developed by Florence Warner and John H. Powrie. Among the correspondents are Frank L. Dyer, vice president of the Edison Manufacturing Co.; George F. Scull, assistant to the vice president; and Horace G. Plimpton, manager of negative production in the Kinetograph Department.

#### **1910. New Jersey Patent Company (D-10-48) [not selected]**

This folder contains correspondence and other documents relating to the New Jersey Patent Co., a patent holding company for the National Phonograph Co. and other Edison concerns. The items for 1910 consist primarily of routine statements, receipts, and letters of transmittal and acknowledgment.

#### **1910. Patents (D-10-49)**

This folder contains correspondence and other documents relating to foreign and domestic patent applications, patent litigation, and other patent matters. Among the items for 1910 are letters concerning federal patent legislation; Edison's involvement in the patent activities of his Legal Department; and various storage battery, cement, and phonograph patents. Many of the letters are to or from Frank L. Dyer, president and general counsel of the National Phonograph Co. Also included is a 21-page report containing abstracts of patent applications abandoned by Edison during the period 1876-1885. A draft of this report, in the hand of William H. Meadowcroft, appears in *Thomas A. Edison Papers: A Selective Microfilm Edition, Part I*, 8: 526-547.

#### **1910. Phonograph - General (D-10-50)**

This folder contains correspondence and other documents relating to the technical and commercial development of phonographs. Among the documents for 1910 are items pertaining to the development of diamond reproducing points, inexpensive phonographs for foreign markets, and disc phonographs. Also included are a general report on the American phonograph market; a

comparative report of general expenses for the National Phonograph Co. for the period June 1909-June 1910; and letters to Edison about the phonograph, to which he responded with marginal comments. Some of the letters are by Frank L. Dyer, president of the National Phonograph Co.

**1910. Phonograph - Edison Business Phonograph  
Company (D-10-51)**

This folder contains correspondence and other documents relating to the Edison Business Phonograph Co. Included are items pertaining to general expenses, sales, company directors, advertising, and other promotional concerns.

**1910. Phonograph - Edison Phonograph Works  
(D-10-52)**

This folder contains correspondence and other documents relating to the business of the Edison Phonograph Works. Among the items for 1910 are letters to and from Frank L. Dyer, general manager of the Edison Phonograph Works, regarding complaints against purchasing agent H. T. Leeming. Also included are shop orders and comparative reports of earnings and expenses for 1909 and 1910.

**1910. Radio (D-10-53)**

This folder contains correspondence and other documents relating to the technical and commercial development of wireless telegraphy or radio. The items for 1910 consist primarily of correspondence with the Marconi Wireless Telegraph Co. of America regarding the renewal of notes held by Edison. Also included are letters of inquiry and items pertaining to Patrick Delany and his "telepost" system.

**1910. Reiff, Josiah C. (D-10-54) [not selected]**

This folder contains correspondence by Josiah C. Reiff, a longtime associate of Edison who was involved in protracted litigation (*George Harrington, Josiah C. Reiff, and Thomas A. Edison v. Atlantic and Pacific Telegraph Co. et al.*) arising from Edison's telegraph work during the 1870s. Among the items for 1910 are requests for loans and other favors from Edison, as well as updates on the progress of litigation. Some of the letters contain perfunctory Edison marginalia.

**1910. West Orange Laboratory (D-10-55)**

This folder contains correspondence and other documents relating to the operation of the West Orange laboratory. Included are items regarding the formation of an engineering and experimental department at the laboratory and the invention of a drying apparatus for photographic plates by Alexander N. Pierman. There are also letters concerning the forfeiture of the charter of the Ott Manufacturing Co., as well as memoranda and other items pertaining to equipment, scrap metal, chemicals, and supplies.

#### **1910. Automobile - General (D-10-01)**

This folder contains correspondence and other documents relating to the design and operation of automobiles and the use of storage batteries in electric vehicles. Among the items for 1910 are documents pertaining to Edison's research into the number of electric vehicles on the road and the experience of their owners with lead storage batteries. Other letters deal with Edison's promotion of trucks using his storage battery. At the end of the folder is an undated draft in Edison's hand of a circular for an "Electric Automobile with the New Edison Battery." Among the correspondents are Frank L. Dyer, vice president and general counsel of the Edison Storage Battery Co., and William G. Bee, sales manager. There are also numerous letters by automobile manufacturers such as Babcock Electric Carriage Co., Electric Vehicle Co., Studebaker Automobile Co., and Waverly Co.; and by individual owners of electric vehicles.

Approximately 60 percent of the documents have been selected. The items not selected include correspondence with Cryder & Co. and others regarding orders, bills, and automobile parts; letters of transmittal; unsolicited inquiries; and documents that duplicate information in selected material.

Invoices and account sheets that pertain to the upkeep of Edison's automobiles can be found in D-10-42 (Glenmont).

auto  
Says that news made the statement  
corrected, undoubtedly Electric cars  
will come down in price in a short  
time, possibly to \$800. for 30 miles  
Mayville Tenn. Jan. 5<sup>th</sup> 1910

Mr. Thomas A. Edison

Orange New Jersey

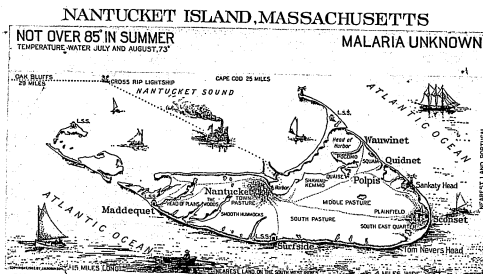
My dear Sir. Several years ago the  
statement was published that you  
had said that Electric automobiles  
would be sold in a few years at a  
cost of \$400<sup>00</sup> or \$500<sup>00</sup>. I was so  
rejoiced, and have been hoping all  
the time that you would find time  
to devote to its accomplishment. Few  
women are strong enough to manage a

Ans.  
1/10/10  
My dear

gasoline car, and the present price of electric is so high that few men are willing to try them. The consequence is that women in ordinary circumstances are deprived of the pleasure of auto-mobiling. I myself want an electric automobile so much but the price is 1750.00. But you do the women of the world the great kindness to have electric automobiles made at a moderate cost. Untold good will result to their health and happiness. and another star will be added to your already brilliant crown of glory. We are Ohio people - though have lived south 27 years. We know relatives of Mrs. Edison in Canton Ohio, and have always so greatly rejoiced in your wonderful achievements. Trusting that your life may be spared to enjoy the fruits of your labor for many years to come. I am, your most Respectfully  
Leticia M. Jones

Grants - Kennan 16.

1910-01-22



**SURF AND STILL WATER BATHING**

**BOATING FISHING GOLF**

I only learned telegraphy in 1863 but I worked in  
Ferry, N.Y. Jan 22, 1910  
Kennan your affidavit of 1869

My dear Sir:  
I have a chance soon to ride in  
the Pullman Car "73" relieved George  
Severger as telegraph operator in the  
depot at Norwalk Conn. J. P. Searles  
was agent and J. A. Jackson master  
mechanic. Isn't it barely possible that  
I was one of the first operators with  
whom you ever worked. Were not you  
at Milan in '37? I well remember Pro.  
Kennan and his father who had a loop  
from the C. & T. R.R. wires the same  
loop at the station  
Now Mr. Edison you may guess

what I am driving at but I will  
tell you. I want to ride on your  
new electric car when you try it  
on West street here in New York.

I have been begging the electrically  
lighted cars I must use to provide  
a lighting circuit independent of the  
power, and now I read that you do  
this.

Why Mr. Edison, I and hundreds  
of thousands others get no time to  
read except in transit to business  
and back home again.

I too am an inventor in a  
small way. Have got out three  
patents, and one or two of them will,  
I feel sure, amuse you in this way,  
that nobody had thought of, or them,  
out before.

Dear Mr. Edison, I would like so  
much to ride in a car that is going to  
have independent light and which is  
the fruit of the labor of a man who  
once was a telegraph operator. I am  
68 - was one of U.S. Mil Tel Corps.

Faithfully Yours

J. A. Stearns

Address 26 E 22nd St N.Y.

Bachman.?

Nite Message.

Thomas A. Edison,

Fort Myers, Florida.

"  
Twenty horsepower gasoline engines in stock  
Fairbanks Merse nine hundred fifty dollars  
weight nine thousand pounds base one hundred  
five by fifty seven inches Nash eight hundred  
fifty dollars five thousand pounds five by five  
feet base, <sup>Can be furnished in ten days</sup> ~~Peos~~ six hundred eighty seven  
dollars sixty three hundred, <sup>Peos</sup> ~~finished in ten~~  
~~days~~ Would recommend Nash Speed and diameter  
of pulley per your sketch, Specially governed  
for lighting purposes.

Bachman.

WUC Mar 14<sup>th</sup> 1910

file  
"B"

Battery - TAE

SUBJECT

THE PACIFIC TELEPHONE AND TELEGRAPH COMPANY

306 Shreve Building.

April 12/10

HENRY T. SCOTT, PRESIDENT.  
LOUIS GLASS, } VICE PRESIDENTS.  
E. J. ZIMMER, }  
F. W. EATON, SECRETARY & TREASURER.  
THOMAS E. SHERWIN, AUDITOR.

SAN FRANCISCO April 12, 1910.

Mr. Thomas A. Edison,

Llewellyn Park, N. J.

Dear Mr. Edison:-

Mr. Anderson, of the Anderson Carriage Company, Detroit, is in San Francisco and represents to me that he is manufacturing drays and express wagons which are equipped with your battery. He offers to arrange with me for investment of \$20,000 in his machines for a five year agency at about the following rates for chassis with motor, without battery, f.o.b. Detroit:

750 lbs to 1000 lbs.....	\$1400
1200 lbs to 1500 lbs.....	1600
2000 lbs to 2500 lbs.....	1800
2500 lbs to 3000 lbs.....	2000

Mr. Anderson states that he will be able to deliver these machines equipped with your battery as fast as they may be ordered.

I notice in the pamphlet of the Edison Storage Battery Company of Orange, New Jersey, that the Eastern parties are using a Lansden wagon and it occurs to me that perhaps the Lansden people have your preference in the matter of handling your battery for this purpose. I simply write this letter, asking confidentially that you put me right in the matter. Mr. Anderson claims to have visited you at the Laboratory at Orange, to have talked over his business affairs with you, and to have a satisfactory arrangement for the supply of the Edison Storage Battery.

If you feel at liberty to do this for an oldtime employee, I shall very much appreciate the favor.

Very truly yours,

C E Nestor

Bay. Anderson is a great pusher  
he has a large Co & will probably be a  
large operator in the future. The Lansden  
Co. is a small Co but has been very

successful. The Battery Co is not  
tied up to any body, all orders will  
be filled in the order of receipt &  
all will get same price

0064

[ON BACK OF PRECEDING PAGE]

Trucks are a slow sale as the public  
is not educated up to them yet, Andersons  
pleasure Vehicles have a good sale.

There is very little doubt however  
that you would be able to  
sell the Trucks so that your  
principal would be safe

Enough but ~~for~~ it will take  
some time to do it if you follow  
up each sale and that the  
parties handling the Vehicle right  
you could in time build up  
a fine business —

Σ

**Executive Committee**

WILLIAM H. ACUFF, President  
A. M. LUPPER, First Vice President  
J. GRIER LONG, Second Vice President  
THOS. H. BREWER, Third Vice President  
F. P. GREENE, Fourth Vice President  
W. R. COOLEY, Treasurer  
G. B. DRESHER, Secretary

Telephone Riverside 112

Organized "for the social, social and commercial betterment of its members"



**The Pennsylvania Society**

HEADQUARTERS  
ASSEMBLY ROOM, CHAMBER OF COMMERCE  
HUTTON BUILDING

Spokane, Washington, May 10th. 1910. 190\_\_

Mr. Thomas A. Edison,  
Orange, New Jersey.

MAY 16 1910

My Dear Sir; --

I have read with much interest, the article of Henry R. Jevons, in May Technical World, in relation to your wonderful success in the Storage Battery StreetCar. Your trials of the Greyhound, the low cost of maintenance you have secured, after the many years of work, the results are very remarkable. By the low cost of operation, your cars are well adapted for the short lines desired to reach the Irrigation districts adjacent to our larger cities and towns. If you remember the writer for 17 years was connected with the old Local Telegraph Company, or Henry Bentleys company, and it was my pleasure to meet you and your interesting family, when you made your visit to this city last year, I being one of the Publicity Secretaries of our lively Chamber of Commerce, and of which you expressed many good things. I have always remembered with pleasure your visit to this part of the Northwest, as it showed you the wonderful opportunities existing for capital, brains and active men. I am now in a position to command any amount of Capital to organize a Company for any good enterprise, and the money is right here, do not have to go East for it, and I am writing you, to inquire if I can secure the Pacific Northwest States, under an exclusive working contract for the sale or lease, as you may determine, of your cars?

The opportunities of this wonderful country are limitless, and Millions of dollars of Eastern and Middle West men, are coming here for investment, in orchards,

**Executive Committee**  
 WILLIAM H. ACUFF, President  
 A. M. LIPPER, First Vice President  
 J. CHURCH LONG, Second Vice President  
 THOS. H. BREWER, Third Vice President  
 F. P. GREENE, Fourth Vice President  
 W. B. COOLEY, Treasurer  
 G. B. DRESHER, Secretary  
 Telephone Riverside 112

Organized "for the social, moral and commercial betterment of its members"



## The Pennsylvania Society

HEADQUARTERS  
 ASSEMBLY ROOM, CHAMBER OF COMMERCE  
 HUTTON BUILDING

NUMBER TWO.

Spokane, Washington, 190

Irrigation plants, Colonization, large wheat farms, mines and other improvements. The opening of the Reservations last year brought a large number of people here, who have gone back home and spread the word, and now we are welcoming a large class of the better educated men, with money.

You have solved a great problem for the short hauls. The cost of construction of overhead transmission systems, Power Stations, and equipment, is so heavy, it nearly prohibits the extensions to the smaller growing districts, which even now are trebling their population within five or ten years. Within the City limits, one gasoline car, connects the end of an electric line with a large sub-division, at a very low cost per mile per passenger. My long and intimate acquaintance with the leading financial and commercial men of this City and vicinity, places me in a position to be able to carry out your proposition, if I shall have the honour to represent your interests in the Northwest country, which we have always known as Washington, Oregon, Idaho and Montana. The Railroad Commissioners have told our Chamber, that the high cost of equipment, etc., brought from the Eastern factories and foundries, has greatly handicapped the railroad development of these States. Your proposition will not require a great number of interests to purchase from.

I trust that I shall have the pleasure to hear from you, and learn if I can be of service to you as well as myself. Awaiting your consideration, I am,

Very truly yours,

*G. B. Dresher*  
 Spokane, Washington.

Bakery. T.H.E

Office of

A. Pardee & Company.

Miners and Shippers of Coal.

252-253-254 Drexel Building.

Ans 5/18/1910

Philadelphia May 16th, 1910

Mr. H. P. Miller, Secretary,  
Laboratory of Thos. A. Edison,  
Orange, N. J.

My dear Sir:

I received your favor of April 15th and am obliged to you  
for the information contained. I have engaged conditionally a Detroit  
Electric the price for which is \$600 more if the Edison battery is used.  
I do not know whether that means an A4 or an A61.

I hoped that I could learn from Mr. Edison whether in taking  
the Detroit Electric I was getting the best equipment in the way of a  
battery that I could have. I am perfectly satisfied that Mr. Edison's  
battery is all right as to power and life, and I only want to be sure  
that in getting the Detroit Electric I am getting the very best electric  
vehicle that I can purchase.

I would be greatly obliged to Mr. Edison or to you for any  
advice that you may be willing to give to me on this score, which, of  
course, will be confidential. With kind regards to Mr. Edison and thanks  
to yourself, I am

after you have had it for a  
Yours truly,  
while drop me a N.H. How  
line ~~the~~ how you are getting on  
with it

TRI-STATE 'PHONE 2414

N. W. 'PHONE NIC. 1089

## THE ELECTRIC VEHICLE CO.

FACTORY REPRESENTATIVES



— NOW BUILDING —  
SHOW ROOM AND ELECTRIC GARAGE  
HENNEPIN AND 15TH ST.

TEMPORARY HEADQUARTERS  
MAXWELL SALES ROOM  
HENNEPIN AVE. AND 9TH ST.

MINNEAPOLIS, MINN. May 17, 1910.

Mr. Thomas A. Edison,  
c/o Edison Storage Battery Co.,  
Orange, N. J.

MAY 20 1910  
J. S. Bentley

Dear Sir:

We are trying very hard to convince the Minneapolis public that the Edison Battery is absolutely right and that you have solved the storage battery problem to your own and to the satisfaction of those who know storage batteries' best.

Our competitors in the electric vehicle business here are, as you know, not prepared to equip their cars with Edison Batteries, and are doing everything in their power to discredit the same. Among other things, they are very industriously circulating the report that you have not finished with the storage battery problem and that the statements and claims for the Edison Battery made by the Edison Storage Battery Co. in their literature and letters, do not bear the stamp of your authority. To be more specific, prospective purchasers assail us with the proposition that we have nothing authoritative from you on the subject. Under the circumstances, will you not write us a letter over your own signature stating that the claims made for the battery in the literature of the Edison Battery Co. are the claims which you, personally, make for it and that you have perfected the battery to your own satisfaction.

Trusting that you will grant us this favor, we beg to remain,

Yours very truly,

The ELECTRIC VEHICLE CO.

By J. S. Bentley

[ATTACHMENT]

Battery - TAE

"I will sign"

Seymour Bentley

Electric Vehicle Co

Minneapolis, Minn.

Your letter of May 14<sup>th</sup> stating

that competitors were making  
statements ~~that~~ of misstatements  
regarding the battery ~~that~~

I want to state that ~~I have~~  
~~up every one of the Edison Storage~~

Every statement made in the  
printed literature of the  
Edison S. B. Co is correct  
in every particular, and ~~the~~

~~manuscript is correct~~ <sup>statement</sup> of the  
& that the battery will, I believe  
the problem of trucking or pleasure  
vehicles in a perfectly satisfactory manner

and  
if you have <sup>Electric</sup> charging 5-17-1910.  
for this a light elec. <sup>10</sup> Run about  
would be best. ~~The best~~  
Thomson & Edison:-

~~to~~ E  
Dear Sir:- It is just  
one month since <sup>MAY 21 1910</sup>  
addressed a letter con-  
-taining return envelope  
-sheet & postage, to your  
Laboratory, asking in-  
formation as to best equi-  
-pment for mail carrier  
where electrical storms  
are frequent. If you had  
to carry <sup>on 35 miles</sup> mail, what kind  
of vehicle, & what kind of cloth-  
-ing would you feel safest in?

would you consider gasolin  
-e or electric conveyance?

H. C. Kingie.

Natkins, Colo.

Auto Cabs founded  
But-TAF May 18th 1910  
May 18th 1910

Geo B Drescher -

Yours of May 10<sup>th</sup> Recd.

There is no doubt about the success  
of the Storage battery Car it  
has been running now 3 months  
on the 28th & 29th at Leno in  
New York - Also in <sup>the city</sup> family Electric  
Carrriages, the sales of which are  
increasing very rapidly & the  
mileage is such with the new  
battery that a man & wife  
& child can go out all day  
on one charge <sup>on</sup> <sup>quad</sup> roads  
here 150 miles is being done  
They will probably  
displace the cheap  
gasoline car as people

2

are finding that the  
repairs & upkeep of the  
latter are really prohibitory  
& they seldom last 4 yrs  
whereas any body can run  
the Electric & the upkeep  
as compared to gasoline  
is a mere nothing -

Yesterday the New York Times  
contained an advertisement  
of the <sup>Electric</sup> Co the well  
known high grade Carriage  
builders who have gone  
into building Electric  
instead of gas cars -  
The advertisement states  
that their latest Brougham  
with 4 people was running

between N York & Phila  
104 miles daily on  
one charge. They  
use no cells of the  
new battery

I have no interest in the  
Street Car, about that  
you can address

RH Beach 10 5th ave NY

So far the only Electric  
Carriage Builders who  
have designed their  
Carriage ~~with~~ so new  
battery can be used  
are Healy & Co NY -

~~The~~ - Bailey & Co

H. Harry McCulloch

Amusing Mares -

The Anderson Carriage  
Co of Detroit, Mich  
Co is the largest & are  
selling rapidly -

For Trucks 1, 2 & 2½  
ton, Lansden Co of  
Newark NJ

Adams Ex have 160 May  
15 Heam & Co \$5 -

+ a host of other dept  
stores, - The Anderson  
Carriage Co I understand  
will soon bring out  
a Truck - I think  
if you could get capital  
you could take on the

5.

Agency for these people  
+ if a garage was built  
where family Electrics could  
be changed & cleaned -  
that an enormous business  
will in time result  
& this business is exceedingly  
profitable

Yours  
J. A. Brown

Harry Bend London  
Catalogue &  
also Battery Catalogue  
2

Friends.  
MR. Hutchinson

Adams Express Company  
Office of the Chief Engineer

G. A. Wells

New York, May 26th, 1910

May 27/10

Mr. Thomas A. Edison,  
Orange, N. J.

Dear Mr. Edison:-

My Dear Wells-Hutchinson  
I have read the device to me  
+ I agree with you that  
it looks like a good  
thing - Hutchinson is  
a very energetic man  
The scheme seems  
to me to be very good. He tells me that you have seen four  
+ a good invention I think you

Mr. M. R. Hutchinson of 50 Church Street, New York,  
has submitted a design of a demountable rim applicable to  
wheels for both pneumatic and solid tires. The scheme seems  
to me to be very good. He tells me that you have seen four  
+ a good invention I think you  
Worthington car which had run up to the time he had shown them  
to you some 16,000 miles, and that you suggested that he call  
my attention to the thing. As stated, it looks good to me,  
but I would deeply appreciate receiving your opinion on the  
subject before presenting the matter to the Company. Mr.  
Hutchinson impresses me as being one of the most capable men  
I have ever met.

Very truly yours,

GAWFO.

I enclose  
GAWFO  
CHIEF ENGINEER.

Anderson

F. C. MILLER  
MANAGER

The Hampton

Albany, N.Y.

FIREPROOF

Ans'd 4/10  
I will hire ~~some~~ <sup>one</sup> clerk of price named  
June 1st 1910.  
Mr. Miller and the money

I have been here over  
work and in this time have  
gone through approx 12,000 cards -  
or rather application slips and  
to date have the names and data on  
526 Fleet Vehicle.

There are to date 104775 licences  
granted so you can see there is  
some little work ahead -

Will you take this up with Mr. Edison  
and see if he ~~thinks~~ <sup>thinks</sup> it advisable  
to hire a clerk to help me on  
this I have inquired and think I  
could get one for \$4.50 a week -  
I am fully capable of handling the  
job but it will be as you can easily  
see take more time than he thinks.

There is too the complication of

F. C. MILLER  
MANAGER

The Hampton

Albany, N.Y.

FIREPROOF

II

June 1st 10

some 160 (average) of new licences  
being filed every day which I must  
catch before they are filed, at least  
such as go in drawers I have already  
been through (the file being alphabetical)

Kindly let me have about \$50.00  
as I have already started to draw  
on personal funds - which are at  
present low -

Respy Yours  
John Anderson Jr.

F. C. MILLER  
MANAGER

The Hampton  
Albany, N.Y.

FIREPROOF

Check sent  
11<sup>th</sup> inst  
June 8 - 1910  
J. C. Miller

Harry see he gets the

money *galt*  
Mr. Miller:

In: Regarding the  
matter of clerk, had already  
taken a chance on Mr. S. seeing  
the advisability of such action  
and lived over. so that the work  
is going on with as much expedition  
as the working horses will permit.  
No outsiders are allowed in the press  
room except during office hours which  
are 9 to 5. as they are afraid  
records might be changed.

So far have been through about 34000  
volumes and have a total of 1004  
volumes.

Kindly see that I get a check for  
5000 or 7500 at an early date as  
I am very nearly "busted" my own  
bank account being low.

See see. I have to pay off now

F. C. MILLER  
MANAGER

The Hampton  
Albany, N.Y.

FIREPROOF

Each work sent.

Did you arrange it with Master  
about the loan - (that he might  
draw on my "pay" for my share.)

Are having very wet weather here  
I suppose its the same with  
you.

Respectfully yours,  
John P. Anderson Jr.

94  
GENERAL ELECTRIC COMPANY

PRINCIPAL OFFICE  
SCHENECTADY, N. Y.

In Reply Refer to Alex. Churchward.

WEST LYNN, MASS.

June 7, 1910.

Mr. Thomas A. Edison,

ORANGE, N. J.

My dear Mr. Edison:-

I am enclosing a list of standard automobile motors which we are designing to be used in conjunction with your battery. They are the same kilowatt capacity as the 85 volt motor but have been laid out for 60 volts so that they can be used in conjunction with 58 to 64 cell battery.

You will also notice that we have two special motors for use in conjunction with your storage battery car.

We will send you speed, torque, efficiency curves of these motors very shortly.

Yours very truly,

*Alex. Churchward*

A. Churchward-P.

*The Writer was obliged to  
leave before signing the above  
letter dictated by him.*

[ENCLOSURE]

ge

85 Volt Standard Motors.

60 Volt Edison Battery Special.

G. E. 1020	85 Volts.	20 Amps.	Speed 2000 RPM.	60 Volts	28 Amps.
G. E. 1025	85 "	22 "	" 1200 "	60 "	32 "
G. E. 1026	85 "	28 "	" 1200 "	60 "	40 "
G. E. 1022	85 "	30 "	" 800 "	60 "	40 "
G. E. 1022	85 "	40 "	" 1200 "	60 "	55 "
G. E. 1027	85 "	60 "	" 900 "	60 "	85 "

STORAGE CAR SPECIAL.

1022	85 Volts	30 Amps.	650 RPM.
1022	85 "	40 "	1000 "

These motors will commutate perfectly with a much higher voltage, viz.  
in case 100 cells of Edison Battery are used in the car.

Alex. Churchward.

1654 BROADWAY,  
NEW YORK.

June 10, 1910.

Mr. Thomas A. Edison,

Llewellyn Park, New Jersey.

Dear Sir:

General Healey directs us to hand you  
the enclosed as he thinks it will be of interest.

Very truly,

Enc.



Mr. Thomas A. Edison,

Llewellyn Park, New Jersey.

[ENCLOSURE]

JUN 11 1910

**PUBLIC LEDGER-PHILADELPHIA.**  
**SUNDAY MORNING, APRIL 17, 1910.**

**ELECTRIC AUTO'S FINE RUN**

**Travels From New York to This City  
in Quick Time.**

An unusual feat of endurance was recorded yesterday when an electric brougham, weighing 2450 pounds, with passengers, manufacturer by Healey & Co., of New York city, covered the distance of 104 1/2 miles from that city to the Philadelphia City Hall in 7 hours and 15 minutes, with a single battery charge.

The auto, which is of the ordinary stock type erected by this concern, was driven by Charles R. Phillips, who was accompanied on the trip by William Stout and W. H. Douglass, of New York.

The route covered led through Staten Island, New Brunswick and Camden, and a stop-off of an hour and a half was made at Hightstown for dinner. The brougham left New York at 9:45, arriving in this city at 5:20 o'clock.

The run, which was made merely for test and exhibition purposes, was accomplished with an original charge of 32 volts in the new type Edison storage battery, with which the Healey machines are equipped. At the end of the trip it was found that the battery still retained 11 volts, which would have enabled it to have gone 25 miles farther.

According to automobile men, the ordinary storage battery is calculated to carry a machine 45 miles without recharging.

Battery -  
Elson

Wm. H. H.  
6/11/10

Return  
He says letter  
to me

General Healey

My Dear General -

I have learned of your Phila run  
with your new trolley and of course  
am highly pleased. You certainly  
have done better than any concern  
that I know of in fact it sets  
a new pace ~~in the~~ for heavy weight  
Electric Vehicles have been handicapped  
for years for the want of a  
reliable source of power -

I can assure you that you can  
now do business on the  
"Satisfied Customer" plan  
You need not <sup>have any</sup> fear ~~that~~ about  
the battery. It will last for  
years -

I have procured from the state records  
at Trenton the whole number of  
Electric Vehicles licensed  
from 1899 to 1906. There are about  
800 of which 98% are abandoned  
not on account of the  
Vehicle but solely on account  
of the unreliability & expense  
of the Lead Battery -

John

705

I will sign



The Ten Cents Club  
Albany, N.Y.

Received  
JUN 14 1910  
JUN 13 1910

Mr. Miller:-

Sir:-

I kindly send  
you \$50.00 at your  
early convenience - Enc-  
reaching receipt for last  
check and not being in  
thoroughly expense account  
than I am.

You will note I have changed  
my quarters - found I could  
do just as well if not a little  
better here and be higher  
up - Have had a terrible  
cold & sore throat - and so



The Ten Cents Club  
Albany, N.Y.

really had to get out  
of the snitch.  
The work is progressing  
in good shape - I have  
gone over about 70% of the  
cards - and the clerk  
I have helping me has  
finished 150 pages out  
of 500 in the "big book",  
which carries the first 20,000  
registrations.  
So another two weeks will  
finish it I should think.  
Did you arrange with  
Meister about my loan



The Cent Club  
Albany, N.Y.

*Mr*

Dear or am I  
paying fines all this  
time -

Hoping everything is Ok  
at the plant I am.

Respy Yours

John R. Anderson Jr.

Battery - TAE

CARL W. S. ROTHFUS  
AUTOMOBILES  
AND AUTOMOBILE REPAIRING  
225-227 W. THIRD STREET

Ans  
June 16<sup>th</sup> 1910

WILLIAMSPORT, PA., June 13, 1910.

Herrmann - The knock the battery  
because they did not build them

JUN 15 1910

Mr. Thomas A. Edison,

East Orange, N. J.

My Fisherman Friend:-

I am contemplating buying a new Electric Car,  
and every dealer has given the Edison Battery a cold shoulder.  
They cannot sell except by knocking  
the battery = The Anderson Carriage  
and have tried to discourage me in getting a car with this  
Battery.

I have been running a Pope Waverly Electric for  
six years with good results with an Exide Battery, but it is  
about time to get a new car. In looking up the price, I find  
the Manufacturers of the car ask \$400.00 additional for your batteries  
but for the same weight it  
costs twice as far as Exide  
Do you not know of any way to improve on this price and what  
guarantee do you give?

There is no Edison Battery in this town and I would  
like to ride in a car and think of my Fisherman Friend as the  
Battery Man.

With kindest regards to Mrs. Edison and the Family.

I remain,

Yours truly yours,  
A D Herrmann

L. Well sign

I am testing out both of  
them here so far find them  
good - yesterday the Anderson  
went 132 miles on one charge  
Edison

Bull. 11-1915

Reid & Co.  
JUN 14 1910

Worce Chain Co

JUN 14 1910

Ithaca N.Y.

I have a problem up which requires a drive from 4 150 HP Motors to the axle of a Car Truck instead of gears. The Car is a large standard passenger Car has 33 inch wheels - maximum speed 350 Revolutions of the wheel 24" sprocket on the axle leading up to two Motors in the Car wheel are so connected with the Truck that they

2 quadrants

revalves when truck passes on a curve

This Car has a storage battery & pulls 4 Regular Passenger Cars -

The starting pressure or strain on the chain will at times be for each chain as high as 10000 lbs - The speed of chain probably be as high as 1000 to 1300 ft minutes. This drive must be extremely reliable otherwise it cannot be used - What do you think of the proposition  
Yours Truly  
Edwards



F.L.MORSE, TREAS.-MANAGER.

JUN 16 1910 6/15/10.

Mr. Thomas A. Edison,  
Orange, N.J.,

Dear Sir :-

We have your favor of the 14th inst, and as we read your letter understand that the motor is expected to run at 1050 , the axle at 350 R.P.M., and that there will be four 150 HP motors employed. We regret that we cannot give you a satisfactory transmission with a motor running at this speed, but could give you one provided the shafts are maintained in substantial parallelism with the motor running at 750 R.P.M. or thereabouts. Kindly advise if a motor of this speed is feasible in connection with your work.

As to durability, for your information would say that we have sold upwards of 100 drives to the McKeen Motor Car Co. who use a 200 HP gasoline engine running from 350 to 650 R.P.M., and driving direct from the crank shaft of a six-cylinder engine to the driving wheels of their motor car. These cars are used quite extensively in the West on short branch lines, and some of them are now being sent into the East for the same purpose, we believe one being run on a branch of the Erie Railroad between the main line and Chautauqua Lake. This service we think would be much more severe than the motor drive which you mention, provided the shafts are held in parallelism as stated above.

We are passing your inquiry to our New York office, 50 Church St., and trust you will be able to substitute motor of the slower speed



F. L. MORSE, TREASURER & MANAGER.

Thos. A. Edison-2

so we will be able to quote on a drive that we feel will be most  
efficient and entirely satisfactory.

Very truly yours,

Morse Chain Co.

FILE/AMP

Copy to N.Y.

*F. L. Morse*

THOS. W. HARVEY, M.D.  
453 MAIN STREET,  
ORANGE, N.J.

*Put this in*

June 15, 1910.

My dear Mr. Hopkins,

In accordance with your request I send you a short account of my experience with the old National Electric Car that I have used since 1905, just five years to this date. The car had been used about one year but had new batteries put in just before I bought it. It was good for about forty miles a charge. I put in new batteries about every 2500 miles. I ran the car about 2000 miles a year, it cost me about \$500 a year, but I had the satisfaction of knowing that only the wealthy can really enjoy life, and I took great comfort from the fact that even if a five thousand dollar limousine did whisk past me at a forty mile gait, ~~and~~ when I was laboriously doing four miles an hour, still my ride was costing me so much more than the other fellow's that I could look down with disdain upon him.

For all that, slow as it is, expensive as it is, whenever I get up in a Winter night to make a professional call I turn to the old money-burning snail of an electric, and am at my patient's side before I could have ~~put~~ my gasoline car in shape to run; and then when I come out there is no cold engine to crank back to life. *I get about 18 miles out of a charge now.*

Yours respectfully,

*Thos Harvey*

Mr. C. Hopkins,  
171 Valley Road,  
West Orange.

NORTH ORANGE BAPTIST CHURCH  
ORANGE, NEW JERSEY

WILLIAM M. LAWRENCE, PASTOR  
"The Aboard," East Orange, N. J.

*Copy*

PASTOR'S STUDY June 18th, 1910.

My dear Mr. Edison:-

A few days ago, one of your representatives <sup>18-20-210</sup> called on me, desiring to know what experience I had had with my Studabacker Electric. As I know nothing about electricity, I cannot make my answer in any scientific form. I do not mean that I have not tried to learn, but I fear I am incapable of understanding many points, so that certainly I have had to depend for all information and suggestion upon Mr. Hilsinger, of the North Jersey Mortor Car Company, at whose garage Mr. Colgate stores my car.

As you know, my car was a present from Mr. Sidney Colgate, and he is kind enough to bear all the expenses pertaining to it. Once during my summer vacation, the car is taken down to the factory and the batteries receive attention. Just what that attention may be, I cannot say. I think I am using new batteries at present.

I have had the car five years. It was guaranteed to go forty miles on one charge. The greatest run I have ever made with it on one charge was thirty-five miles. This year, the greatest run I have made was eighteen miles, but that is altogether exceptional and special care was exercised in making the run, the controller being in the third notch and the current turned off whenever the grade was down. This run was made last week to Upper Montclair. I was misdirected and found myself on Upper Mountain Avenue, which

was a pretty good pull on the car.

If I were asked in a word what is the main difficulty, I would say the uncertainty regarding the length of time the car will go on one charge. Sometimes this year I have not gotten more than eleven miles. That is the main difficulty,- its uncertainty, so that the batteries are sometimes charged more frequently than they should be. I do not speak of this uncertainty in the light of a complaint, for the car has served me very well, because I have not attempted long distances.

Another thing that has been disagreeable, and of course necessarily so, has been the effect of the acid upon the mechanism of the car itself. Another thing which I have noticed has been the variability of the strength of the car. Under equal conditions, I have been able to do some days what I could not do other days. I mean by that, that the car would go faster. Upon my notification to Mr. Hilsinger, no adequate cause could be found, but it certainly was true that the current was stronger at one time than at other times.

I am afraid I have not done very much to answer the questions of the young man. I was very much pleased with him and would be glad to give any further information possible.

Yours very sincerely,

*Wm M. Lawrence*

THOMAS A. EDISON  
President

FRANK L. DYER  
Vice-President and General Counsel

E. G. DODGE  
General Manager

H. F. MILLER  
Secretary-Treasurer

## EDISON STORAGE BATTERY CO.

Telephone, 838 Orange

ORANGE, NEW JERSEY June 20/10

Mr. Frank L. Dyer:

Enclosed please find a list of electric automobile manufacturers, with the name of the sales manager or some other of their principal officers:

ANDERSON CARRIAGE CO. This concern you are familiar with.

BABCOCK ELEC. CARRIAGE CO. The attitude of these people toward the Edison battery has been very unfavorable, although recently they stated that they hoped the Edison battery would prove O.K. Their main objection has been that the battery occupies too much space and is of course not designed for the Edison battery. They bought 60 A-4 cells and claim to have tested them out, but that they were not satisfactory owing to the voltage falling off at high speed. We have since loaned them 42 A-6 cells, but up to the present time have not made a test. They told our Mr. Doty last week that Mr. Babcock was going to put this battery in his own testing car as soon as he could have it changed over.

BAKER MOTOR VEHICLE CO. They have purchased 6 sets of A-4 batteries, 48, 50 and 54 cells. We have a letter from one of their customers in New Hampshire, who writes that his battery of 54 A-4 is very much pleased with. Their New York representative is knocking the Edison battery every opportunity he gets. In fact, the only agent the writer knows anything about who is boosting the battery, is their Boston agent. He told the writer the last time I was in Boston that he was very much pleased with the results obtained. We have never put any into their trucks. The American Express Company in New York, who own a Baker truck, have written us this morning that they would like to have us figure on putting a new Edison battery in same. This shows that the American Express Company are dissatisfied with the lead battery.

BROOK CARRIAGE & WAGON CO. Have never purchased an Edison battery.

2.

S. R. BAILEY & CO. This concern you are familiar with.

CHAMPION WAGON CO. They have never purchased an Edison battery.

COLUMBUS BUGGY CO. They have purchased 1 A-4 battery of 40 cells. Have never heard anything from them in regard to it. They also tested out a 40 A-6 cell battery in a rig that was sent to Boston for the Boston Edison Co., who report that the battery is O.K., but that they have recently had trouble with the vehicle. The Columbus Buggy Company have recently gone into the gasoline car business and are not pushing the electric.

COMMERCIAL TRUCK CO. OF AMER. Have bought one Edison battery which they sold to John Wanamaker for one of their trucks, and have recently placed an order for another.

COUPLE GEAR FREIGHT WHEEL CO. Recently sent us an order which is not yet shipped.

ELECTRIC OMNIBUS & TRUCK CO. Have not yet built any rigs. Have two or three orders on our books for batteries, and will be ready about the last of the month.

ELECTRIC VEHICLE CO. The president of this concern ~~mentioned earlier~~ ~~as having in his rank~~ ~~is~~ is president of the Electric Storage Battery Company of Philadelphia. They have recently gone into a combination with the United States Motor Co., which is the Maxwell-Briscoe combination.

FRITCHIE AUTO & BATTERY CO. Have never purchased/

GENERAL VEHICLE CO. This concern you are familiar with. They have recently placed an order for two more batteries.

IDEAL ELECTRIC CO. The president of this company committed suicide while we were in the west recently. Think they are pushed for money.

C. P. KIMBALL & CO. They have never purchased any batteries of us, although Mr. Prayer reports that their attitude is a little more favorable.

OHIO ELECTRIC CAR CO. Have purchased one battery. Received a letter this morning from the purchaser asking for instructions as to care of the battery. I have been told that they have sold several rigs for Edison batteries, but they have not placed their orders.

3.

PITTSBURGH MOTOR VEHICLE CO. They have purchased two batteries.

RAUCH & LANG CARRIAGE CO. Have purchased 40 A-4 cells.  
T The writer proved to them that this battery was too small. They then purchased 40 A-6 cells, and I understand that this battery is in Detroit. They returned the 40 A-4 cells and we shipped them another 40 A-6 battery. They really have two A-6 batteries, 40 cells each.

STUDEBAKER AUTO CO. They have demonstrated 64 A-6 cells in their truck in New York, Chicago and Boston. We also shipped them 70 A-4 cells but have not heard report of test.

WAVERLEY CO. We loaned them a battery. First put in 48 A-4 cells. While I was at their factory we got them to let us send them 6 cells more. Have not heard result.

WASHINGTON MOTOR VEHICLE CO. Bought 4 sets.

WOODS MOTOR VEHICLE CO. Bought one set 60 A-4. Have not heard result.

HEALEY & CO. O.K. They build a special brougham for Edison batteries. They recently made a test from New York to Philadelphia on one charge, and from Philadelphia to New York on one charge, 104 miles. They have sold several of these broughams equipped with the Edison battery.

Very truly yours,



[ATTACHMENT]

Anderson Carriage Co., Niopelle & Clay Sts., Detroit, Mich.	T.C. Anderson, <sup>✓</sup> Pdnt. Geo. E. Bacon, Designer.	Pleasure
Babcock Electric Carriage Co., 226 W. Utica St., Buffalo, N.Y.	F.A. Babcock, Pdnt. & G.M. F. G. Peck, Designer.	Pleasure
Baker Motor Vehicle Co., West 80th St., Cleveland, Ohio.	✓ F.R. White, President, O.B. Henderson, Sales Mgr. E. Gruenfeldt, Designer.	Pleasure and Commel.
Broc Carriage & Wagon Co., 1665 East 40th St., 4021 Payne Avenue, Cleveland, Ohio.	✓ O.F. Fisher, Pdnt.	Pleasure
S.R. Bailey & Co., Amesbury, Mass.	S.R. Bailey, Pdnt. E.W.M. Bailey, Treas. & G.M.	Pleasure.
Champion Wagon Co., Oswego, N.Y.		Commercial.
Columbus Buggy Co., Dublin Avenue, W., Columbus, Ohio.	✓ C.D. Firestone, Pdnt.	Pleasure.
Commercial Truck Co. of America, 1222 Arcade Bldg., Philadelphia, Pa.	E.R. Whitney, Ch. Eng. F.E. Whitney, Supt.	Commercial.
Couple-Gear Freight-Wheel Co., Grand Rapids, Mich.	M.B. Church, Pdnt. J.W. Brown, Manager.	Commercial.
Electric Omnibus & Truck Co. 135 Broadway, N.Y. City, N.Y.	C.J. Field, Pdnt.	Commercial.
Electric Vehicle Co., Park & Laurel Sts., Hartford, Conn. (Under control of U.S. Motor Car Co.)	E.W. Nuckels, Secy. & Receiver.	Pleasure and Commel.
Fritchle Auto. & Battery Co., 1449 Clarkson St., Denver, Col.	Oliver P. Fritchle.	Pleasure.
General Vehicle Co., Long Island City, N.Y.	P.D. Wagoner, Pdnt. G.W. Wesley, Supt.	Commercial.

[ATTACHMENT]

Page -2-

Ideal Electric Co., Chicago, Ills.	S.H. Peterson.	Pleasure.
C.P. Kimball & Co., 315 Michigan Ave., Chicago, Ills.	✓ Chas. F. Kimball, Pres. J.S. Gorham.	Pleasure.
Lansden Company, Newark, N.J.	John Lansden, F.A. Whitten.	Commercial.
Ohio Electric Car Co., Toledo, Ohio.	H.P. Dodge, Gen. Mgr.	Pleasure.
Pittsburg Motor Vehicle Co., 5722 Ellsworth Ave., Pittsburg, Pa.	Chas. A. Ward.	Commercial.
Rauch & Lang Carriage Co., 2180 W. 25th St., Cleveland, Ohio.	✓ Chas. Lang, Secy. & Treas. D.C. Cookingham, Supt. J.H. Hartner, Designer.	Pleasure.
Studebaker Auto. Co., South Bend, Ind.	✓ Hayden Eames, G. Mgr. H. Robinson.	Pleasure and Commol.
The Waverly Co., 139 South East St., Indianapolis, Ind.	Herbert H. Rice, Vice-P. W.C. Johnson, Secy & Asst. Mgr.	Pleasure and Commol.
Washington Motor Vehicle Co., 213 "I" St., S.W., Washington, D.C.	W.H. Conant,	Commercial.
Woods Motor Vehicle Co., 2815 Calumet Ave., Chicago, Ills.	✓ Louis E. Burr, Pres. ✓ Fred. J. Newman, Designer & Supt. R. S. Fend.	Pleasure.
Healey & Co., Broadway & 51st St., New York City, N.Y.	Gen. W.M. Healey.	Pleasure.

THOMAS A. EDISON  
*President*

FRANK L. DYER  
*Vice-President and General Counsel*

E. G. DODGE  
*General Manager*

H. F. MILLER  
*Secretary-Treasurer*

## EDISON STORAGE BATTERY CO.

*Telephone, 928 Orange*

ORANGE, NEW JERSEY June 20  
1910

Mr. Frank L. Dyer:

The American Sugar Refining Company of Jersey City have recently equipped one of their Studebaker 8-ton trucks with 70 A-8 cells, and while they have experienced some trouble in getting sufficient voltage to charge the battery, the engineer writes us this morning that he is satisfied, after using the Edison battery for a month, that it is superior to any battery on the market for his particular class of work, and wanted to know if we could fill promptly another order for a similar battery.

Frederick Loeser & Company of Brooklyn have had an Edison battery in one of their trucks since last September. They recently gave us an order to replace six lead batteries. This they did after a very severe test of the Edison battery through all the winter months. The truck equipped with the Edison battery was the only one they could absolutely rely upon to make the trip to New York and get back to their store without boosting. Loeser trucks were made by the General Vehicle Co.

Very truly yours,



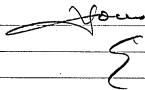
JUN 22 1910

My Dear Carlisle -

I have men at the different state Capitals getting from Auto license records names of purchasers of all Electric Vehicles for the last ten years & also men out investigating the history of each machine. The record is bad, not the fault of the Vehicle but the lead battery - I enclose copy of an amusing letter <sup>which you about your car</sup> when I get record complete will be glad to let you see ~~the~~ ~~particulars~~ why the ~~Electric~~ Electric Vehicle has been so slow ~~the~~ A great amount of work will have to be done by all of us to remove the bad impression - a satisfied & delighted

2

Customer is the only method that will build up a permanent business,

 J. C. Williams

I will sign

[ATTACHMENT]

JUN 22 1910

Get his initial

His address is

Quideboken Co

South Bend

Ch. Indiana



PHONE 4474-CORVLAUDT  
5  
**The P. Edward Wisch Service**  
**DETECTIVES**

171 BROADWAY

NEW YORK

SUITE 11

June 28, 1910.

Thos. A. Baisor, Esq.,

Orange, N. J.

Dear Sir:-

Replying to your inquiry regarding my experiences with the use of an electric automobile, would say that all my trouble, when I had one of these cars, was with the batteries. I am satisfied that if these troubles could have been eliminated at the time, an electric car would be a greater pleasure to run than any gasoline car, owing to the fact that they would always be available when wanted, less attention required and would run more smoothly and noiselessly. I am now the owner of two gasoline cars, but would much prefer a reliable electric, but this can only be when the batteries are such that they will stand up and serve the purpose for which they are intended, which was not the case at the time I owned my electric.

I trust that you may some day meet this requirement and then I shall be glad to again consider the purchase of an electric car, as my wife could run my electric car and find considerable enjoyment with it, which she could not do with a gasoline car.

Very truly yours,

*P. Edward Wisch*



**Thomas Oakes & Co.**

SUCCESSORS TO  
T. OAKES & SON.

**WOOLEN  
MANUFACTURERS**

JUN 29 1910

*Bloomfield, N.J.*

June 28th, 1910.

Thos. A. Edison Esq.,  
Orange,  
New Jersey.

Dear Sir:-

In reply to your inquiry through your representative Mr. Hopkins as to my electric run-about would say it is very satisfactory except its limited distance capacity with one charge of electricity. It has an acid battery and will run on our ordinary roads about sixteen miles. I find it particularly convenient for the lady members of my family who use it with perfect safety and without any other attendant.

Should the further development of batteries increase the one charge distance to say 75 to 100 miles for an ordinary carriage seating four persons I predict for such a vehicle a great demand.

Very truly yours,

*Thos Oakes*

To/v

*Wm. Dyas*

*Ans. July 1st 1910*  
*OK.*  
*Ber*

**Studebaker's**

OFFICE OF  
MR. CARLISLE

SOUTH BEND, INDIANA  
UNITED STATES OF AMERICA

June 29-1910

Hon. Thomas A. Edison,  
Llewellyn Park,  
Orange, N. J.,

*Billy Bee's Sign*  
*Jul 1-1910*  
*See me about this*  
*4*

Dear Mr. Edison:-

It is a pleasure to have your letter of the 22nd instant and we are interested in the comments that you make. That certainly will be an interesting record that you are developing with reference to the owners of electric automobiles and I am sure it will develop or rather it will emphasize the importance of organization.

The Exide people have a strong organization. It is their ability and their facility to look after the electric car locally that makes their product attractive. I do not know what the electric vehicle manufacturer would do if it did not have this protection back of it, particularly so out on the Pacific coast and in the middle west where electric vehicles are occasionally dropped in for use here and there.

We know from our own experience that the battery of an electric vehicle requires intellectual care, and we find all the difference in the world when these batteries are looked after by a man who understands his business and who gives to it thought and care vs. the man who does not care and lets somebody else pay the bill. Our experience has brought us in contact with all kinds of conditions, even in garages where expert experience is presumed available.

We are making some pretty fine developments in New York, but we must confess the battery proposition has been more than a passing discouragement. Mr. Redden, manager of our automobile department in New York, told me some time ago that they were watching the development of your battery that they are now experimenting with closely, and of course we all hope for a brilliant success.

Mrs. Carlisle joins with me in greetings and best wishes to you and all members of your family, and we often wish that we might have the pleasure of a visit from you here at South Bend.

With greetings and best wishes, believe me,

Cordially yours,

*Wm. Dyas*

L. A. OPDYKE M.D.  
55 CLINTON AVE.  
JERSEY CITY

(5)

June 19/10

Dear Mr. Edison -

At the request of  
your Mr. Hopkins - I can  
find pleasure in stating  
that after having used  
an Electric car for five  
years during the early part  
of automobiles - that I am  
fully convinced that the  
Gestine is the ideal car  
for members of my pro-  
fession in their city-work.  
Clean, reliable & handy

L. A. OPDYKE M.D.  
55 CLINTON AVE.  
JERSEY CITY

& Every ready -  
Should you be able to  
perfect the battery so that  
it could be readily charged  
with out risk by any  
fool Thompson & get  
reasonable life & capacity  
from it - I believe it  
would be the doctors  
popular car

Yours

L. A. Opdyke

Jersey City, N. J.  
June 30th, 1910

Mr. Thomas A. Edison,  
Orange, N. J.

Dear Sir:-

One of your representatives called here to get some information regarding batteries. We took on the Waverley electric line eleven years ago and received the cars at first with the National batteries in. These were made in Buffalo. After about four months use the batteries dropped from a mileage of about 35 miles to about 9 or 10. After a lot of work on the batteries the Waverley Co. exchanged all of them for new sets of Gould batteries. These batteries gave a little better service but we had the same trouble over again and finally the Waverley for half price replaced them for Elide batteries. These gave us the same trouble as the others and at last as you know like a great many other agents we gave up the electric business in disgust. The cars themselves were absolutely reliable and we did not have any trouble with them in any way. Our whole trouble lay in the batteries. The connections between the jars broke, the jars themselves broke and the sediment from the positive plates would shake loose and drop in the bottom of the jar and short circuit the cells. These troubles were continually arising from the time the batteries had run from a thousand miles up. We delivered about 25 electric cars in Jersey City but up to the present time there is only one of them left and it is very doubtful if there will be any more electric cars here for a long time. Battery troubles have left a very bad impression and I think to get any electric cars in here you would have to give them to them and allow them to pay for them at the end of twelve months if satisfactory.

Respectfully yours,

G. E. Blakeslee.

Crescent Automobile Co.,  
2565 Boulevard,  
Jersey City, N.J.

JAMES M. STEWART, M. D.  
101 VAN HOUTEN STREET  
PATERSON, N. J.  
OFFICE HOURS: 1 TO 5 AND 6 TO 8 P. M.

July 1, 1910

Mr. Thos. Edison,

Dear Sir, - Your representative, Mr. Hopkins, has just been in to see me, and asked me to write you what I know about electric machines from the practical side as a physician.

I have used a Columbia electric runabout for about five years with more or less satisfaction, often less than mine, owing entirely to the condition of the batteries. There is no better method of transportation for a physician in all weathers than the electric car, provided you can get the mileage. I do not need to tell you how quickly the lead battery deteriorates, and how soon the mileage decreases. Of course that is

JAMES M. STEWART, M. D.  
101 VAN HOUTEN STREET  
PATERSON, N. J.  
OFFICE HOURS: 1 TO 5 AND 6 TO 8 P. M.

the reason physicians who have used them discarded them for the gasoline car. But I know that the electric car would be preferred for professional work by nearly my whole un-Rotarian if the conditions were right. The item of expense must be considered. The average doctor does not possess an income much in excess of his expenses, so that - well make the strongest appeal to him which is reasonable in the initial cost, and within his income in the long run of

Truly Yours  
Dr. M. Stewart

TELEGRAPHIC ADDRESS  
PYECOMBE, ELIZABETH  
N. J. CODE USED

*The Singer Manufacturing Co.  
Factory No. 1,  
Elizabethport, New Jersey.*

July 7th, 1910.

Mr. Thomas A. Edison,  
Menlo Park, N. J.

Dear Sir:-

In response to your inquiry by Mr. Marcus C. Hopkins, in regard to my experience with an electric automobile driven by a storage battery, I beg to say that I did have such an automobile at one time and so far as the machine itself was concerned I had no fault to find with it. The weakness, however, lay in the source of power which was storage batteries. These batteries I found not only very short lived for such service but they also gave considerable trouble on account of short circuiting in various ways and indeed they caused me so much trouble that the car was practically useless on their account and I felt obliged to discard it.

Yours very truly,

*P. Dickl*  
P. D.

JUL 8-1910

(5)

Bit - RAE  
Fleming Carlier -

Rec'd Rev  
July 17 1910

You are mistaken about the Exide  
people looking after the cars or  
rather their battery. That is just  
what they do not do, but it is  
just what we do - Lowndes has  
~~we~~ sold 422 delivery wagons <sup>T. det.</sup>  
over 120 are 5 yrs old & not  
one has been abandoned.  
Every customer is a reference  
& nearly every one has given  
repeat orders. The batteries  
have been looked after thoroughly.  
There is no other maker of  
Electric Trucks that does  
give references - more than

300 of them are stored as  
junk on account of unreliability  
of battery & expense of same  
& lack of mileage. I am getting  
the history of every one  
& you will be surprised when  
I get it complete, you see  
as long as you rely on  
Ames who is prejudiced I  
am certain you will  
have only an indifferent  
success with trucks.

Yours  
W. C. E.

N. Y. & N. J. Telephone: 2162  
COURT HOUSE Telephone: 506

[illegible]

My experience covered a period of one year with a Pope-Waverley, with which I probably covered two thousand miles. Since that time I have been operating gasoline cars, and between the two motive powers, there is no comparison.

The electric motive power is easy manipulation; no noise or excitement of any kind while operating; so easy of manipulation that after running forty-five or fifty miles, that you feel no fatigue whatsoever, which is the direct opposite in running a gasoline car.

I think that the Motor car is an ideal car for pleasure trips, and if I could be assured that sufficient power could be stored in a car, which would give continuous running, from one hundred or one hundred and fifty miles, I would prefer it to all others.

I have been interested in reading the articles evidently written by yourself or your representatives, regarding the battery which you have perfected for use in electric vehicles, and sincerely hope it will be successful, as I believe the electric power is the coming motive power, not only for pleasure vehicles, but for all other things.

Yours very truly,

WHY/M

Return this letter to me

*Bar - wagon*

COMMONWEALTH EDISON COMPANY,

EDISON BUILDING, 120 ADAMS STREET,  
CHICAGO, ILL.

ADDRESS ALL COMMUNICATIONS TO THE COMPANY

*Ans 7/25*

Thomas A. Edison, Esq.,  
Edison Laboratories,  
Orange, New Jersey.

Dear Sir:

*Acknowledge the essay  
I will take this up at once  
July 19th, 1910  
with Insull see that  
it is attended to  
Then send them to Pres  
tell him amount  
to be sent to  
to see report*

Mr. Insull, as he was leaving the city, asked me to take up with you directly the question of specifications for Lansden Wagons for this Company's use to which he referred in his letter of June 25d.

In general terms we would want these wagons capable of carrying 3,000 pounds, although they would rarely be loaded with very much over one-half this amount. We would want them capable of going fourteen or fifteen miles per hour on good roads. We would want the bodies to be of the open express wagon type, similar to those of the wagons now in use by us, and last, but not least, we would want the batteries to be Edison batteries of just whatever type you would recommend for this class of service.

We have figured with the Lansden Company once or twice, but as yet have bought no wagons of them. They may for this reason not feel disposed to spend as much time on working out the details of our requirements which they otherwise would. Mr. Insull, however, asks me to state to you that we will buy two of these wagons immediately from them if their price is right.

As to our service in general, I might for the information of yourself and the vehicle people, say that we do a general wiring construction business and also a jobbing business in supplies in connection with our Central Station.

**COMMONWEALTH EDISON COMPANY,**

EDISON BUILDING, 130 ADAMS STREET,

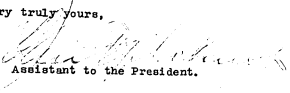
CHICAGO, ILL.

ADDRESS ALL COMMUNICATIONS TO THE COMPANY

T. A. E. (2) July 19. 1910.

This results in our maintaining a large warehouse in the center of the city and branch warehouses at three or four points in the outskirts. There is a great deal of hauling done between the main store and branches and also to customers premises. The loads, while at times they may be heavy, are generally speaking light, and it is very essential that these wagons should be able to make the speed referred to.

Very truly yours,

  
Assistant to the President.

[ON BACK OF PRECEDING PAGE]

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$$\begin{array}{r}
 53) 225 \quad 4.2 \text{ hours} \\
 \underline{213} \\
 120
 \end{array}$$

$$4.2 \times 12 = 50.4$$

$$\text{Rating } 70\% = 35 \text{ miles}$$

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auto - Transmittals

38 North Maple Avenue  
East Orange, N. J.

Thank you for  
the information  
Thomas A. Edison.  
Dear Sir, -

Recd & Ans  
JUL 28 1910  
7/26/10

One of your representatives  
called on me last week,  
to enquire about my opinion  
of an Electric Automobile.

I at one time owned  
an Electric Studebaker Run-  
about. As far as the run-  
ning of the car goes, I

I liked it very much, but I  
had the Lead batteries which  
were very unsatisfactory. I have  
despised of my car as the  
batteries were always giving me  
trouble. I have seen your new  
batteries and am convinced that  
they would be very satisfactory.  
So I should ~~contemplate~~ purchase  
my another Electric car, I should  
prefer have one equipped with the  
Edison-batteries.

Yours truly,

Emily W. Strong.

Monday July 26<sup>th</sup> 1910.

*Public Service Corporation of New Jersey*

*Anthony R. Kusor  
First Vice President*

*Newark, N. J.*

August 4, 1910.

Dear Sir:

I have had four electric vehicles since 1900 for my private use.

I have two at my place at Bernardsville at the present time, one a Columbia Victoria and the other a Baker Victoria. Mrs. Kusor and I use them for short runs every day during our stay at Bernardsville, which is nine months out of the year.

They have given very good satisfaction and the only drawback, if any, that we find with the electric vehicles is battery trouble and lack of mileage. The limit that I can get out of a new battery is about forty miles on a full charge on the Bernardsville hills.

Very truly yours,

*Anthony R. Kusor*

Mr. Thomas A. Edison,

West Orange, New Jersey.

1582 ✓  
Automobile

August 5, 1910.

Messrs. Edison Dyer Wilson Dolbeer:

I would report on my visit to the Keystone Vehicle Co., at Reading, Pa., as follows:

The plant is of fair size, employing 285 men. The concern is managed by Mr. John L. Cox, who seems very capable and intelligent.

The sample wagon was nearly completed, and would have been shipped Saturday, had I not given them instructions to put on the signs, which will delay shipment until Monday.

The capacity of this plant as far as our proposition is concerned, would be 20 wagons per week, and four weeks to complete the first 20, after which 20 could be shipped each week. At present they are quite busy manufacturing automobile bodies. One of their customers is The Terminal Taxicab Company, Washington, D. C., who have ordered ten bodies, in which the Edison Battery is to be placed.

These people have made over 1500 wagons for the Grand Union Tea Company, and 500 for The Great Atlantic and Pacific Tea Company, all of which are used on about the same roads and under the same conditions of our scheme. I have brought photographs of these wagons with me.

They say that a saving in freight could be made by shipping to different points in carload lots, and then make distribution from the point shipped to. The cost of a car with seven wagons from Reading to Chicago is \$55.00.

It will be seen in the photographs of the Tea wagons that there is great opportunity for advertising on the side panels. This lessens the cost of the wagon to us, and increases the advertising value, ~~to some~~ I think we will save about \$8.00 on each wagon by this Tea Company construction. The panels are solid, but are finished by putting the lithograph (backed by canvass), on the outside. When this is varnished, it is serviceable and very bright in appearance, and is certainly a great advertising opportunity.

C. E. Goodwin.

Battery, S.

1524

Aug. 6, 1910.

The Rauch & Lang Carriage Co.,  
Cleveland, Ohio.

Gentlemen:

One of our salesmen while recently in Detroit had occasion to call on your agents, Neuman & Co., and, without disclosing his identity, sounded them out on the subject of the Edison battery. He has made it quite clear to us that Neuman & Co. are not making efforts to introduce the Edison battery, nor are they limiting themselves to the making of tests, but on the contrary are going out of their way to discredit the battery and ~~disparage~~ it as disparagingly as possible. When I was in Cleveland, your Mr. Weiber told me that Neuman & Co. had the battery in Detroit solely for the purpose of testing it and that they had particular instructions to give it a perfectly fair show and under no circumstances to attempt to discredit it. It is clear to us that Neuman & Co. are not carrying out your instructions and we must therefore insist that the battery be returned to you at Cleveland, or, if this is not convenient, returned to us, and we will give full credit for the same.

Later on Messrs. Neuman & Co. may change their

R. & L.

(12)

attitude regarding the Edison battery, and in that event there would be no objection to your letting them have cars equipped with the battery; but at the present time they are certainly doing no good for the Rauch & Lang car as a vehicle for the Edison battery. The fact that Newman & Co. have not sold this single car, while the Anderson Carriage Company are selling vehicles by the dozen equipped with Edison batteries is a very good indication that your agents in Detroit are apparently not making the proper efforts to advance either your interests or our own.

Yours very truly,

FID/IWW

Vice-President.

M. E. JOHNSTON  
79 WALL STREET  
NEW YORK

Thank him for his letter, & say that I hope  
to make the Electric not only the family  
machine but a touring machine as well  
+ possibly do away with the Rubbar

August 8, 1910.

Mr. Thomas A. Edison, —  
Valley Road,  
West Orange, N. J.

I will sign

Dear Sir:—

Ans 9/10 Return this to me

Understanding that you are interested in the service rendered by electric pleasure vehicles, I am glad to give you my personal experience.

In May, 1908, after inspecting a number of makes, we decided upon a Baker Victoria Phaeton, it being equipped with an Exide Battery of 24 cells, 9 H V, and up to date have not regretted the purchase.

Outside of tire troubles we have had splendid success, the car has been in the shop but once; in April 1910 the plates were washed and acid renewed at an expense of about \$40.00.

In March, 1909, the two rear tires were replaced by Dayton airless tires, which, the Baker people claim has caused the mileage to decrease, but the added comfort of feeling that they at least would not puncture more than makes up for the loss of 5 or 6 miles on a charge. We had 55 miles, and down to 48 before changing tires; since then it has run down to 42. For awhile before washing plates we could not get much over 56 miles.

We charge the car ourselves now (for awhile it was done at a public garage) running it up to 61 on high amperage and again to approximately the same on 9 or 10 amperes, generally discharging to 40 to 42 volts. The Mercury Arc Rectifier (G. E.) has been tested a number of times, but it still takes from 12 to 14 hours to charge the car, and as there is not an automatic starter it is necessary to keep pretty close watch so as to start the rectifier up again whenever the Public Service people see fit to change engines or interfere in any way with the current.

The last of August, 1909, I left East Orange on account of sickness, returning last of April, 1910; the car was jacked up to spare the tires, but was not touched otherwise. Upon return, Mr. Platt, of Baker Company, felt sure the batteries would need considerable attention, but I fed them very slowly at about 10 amperes for 25 or 30 hours, and had 53 miles - same results, after which a machinist came from the Baker Co's. shop, went over everything carefully, but did nothing save clean off old oil and renew the lubrication, and expressing his surprise.

We have had 40 to 44 miles on each charge since then, and if it did not take so terribly long to get the car ready for the road, and could get more miles out of a charge, there

NO. 2.

TO Thos. A. Edison.

DATE 8/8/10.

would not be the slightest complaint. My wife also runs a gasoline car, but she clings to the little phaeton as her first and best love.

Pardon length of this letter, but your Mr. Hopkins stated you would like to know my experience and what I thought of electric vehicles for pleasure, so I have spun out this tale.

Yours truly,

A handwritten signature in cursive script, appearing to read "M. J. Johnson", with a long, sweeping flourish extending to the right.

of 46 Chestnut Street,  
East Orange, N. J.

MEJ-C-P

[AUGUST 27, 1910]

CG - stored

PYDEL raw

4th Asst PM General - Wash DC

My Dear Delrai,

I thank you for the information sent me. I want to ask one more question. If a light high speed (15 miles hour) delivery wagon carrying from 600 to 1000 lbs could be made not costing more than 850 dollars & of extreme simplicity, employing Electric Motor & Storage Battery that would last for years, could the Post office dept ~~use~~ make use of such a vehicle in cities

Yours  
JAE

I will sign -

Cento - hundred

IRA M. MILLER  
AKRON, O.

Copy of letter  
to Mr. Lansden

Ans 9/16

John M. Lansden  
Newark, N.J.

My Dear Mr. Lansden.

I am having just one

D- of a time to get for the orders  
for Wagons. Up to this time Cleveland  
people wanted to see how the Hallett H  
Wagons maintained themselves but  
now that we have proven or shown the  
Edison Battery in these Cars to be O.K. &c  
up comes the Madison and the Baker  
people with advertisements that they will  
soon have Trucks and Wagons for the market  
and these Auto-men want to wait and  
see what they have as they feel adver-  
tise they will use Edison Battery.

How soon can you have the Washington  
type back ready? Further I want to  
impress upon you the necessity of  
looking after the finish of your Cars  
and watch carefully the construction

~~Dear~~

Dear Mr. Miller -

Pound Lansden right along -  
pound him on his high price,

Sept 11th 1910

E

of the parts your Expert Mr. Carlson  
discovered wrong when here,

Yours Very Truly  
Geo. W. Miller

Mr. Edison

Your battery is coming on fine  
with the Hall's Higher Dragons  
but Leusden must look a little  
better after the construction of  
the Dragons -

The Baker Co. have put a demonstration  
dragon in with Hall's with Edison Battery  
and with their fine construction it is  
hurting me like the deer to get orders.

Geo. W. Miller

TELEPHONE MAIN 838  
LAW OFFICES OF  
JAMES K. JONES  
621-622 COLORADO BUILDING  
WASHINGTON, D. C.

September 19, 1910.

Frank L. Dyer, Esq.,  
Orange, N. J.

My dear Mr. Dyer:

I am figuring on getting me a new electric car, and have been discussing with the agent the question of buying a car containing the new Edison battery.

You may remember that I have asked you about this battery several times. The agent for the automobile company does not seem to have any very definite idea what this battery will do - about its mileage performance as well as its lasting qualities.

I am considering installing in this car a battery of the type known as "A 8", and I write to ask if you will not have some one connected with the company give me information concerning the mileage performance as well as the probable life of such a battery.

I am told by the agent of the automobile company that the literature sent out by the makers of the battery give no light upon these two subjects, and as the battery is a new one, I don't like to go to the expense of having it installed without more information than I now have. From what I am told, it would appear that it will cost some \$300. or \$700. more to have the Edison "A 8" battery installed than the Standard Exide battery now used in these cars.

Thanking you in advance for your courtesy in the premises,

I am,

Yours very truly,

*James K. Jones*

861

Sept. 20, 1910.

Jas. H. Jones, Esq.,  
621 Colorado Building,  
Washington, D. C.

My dear Mr. Jones:-

Your favor of the 19th inst. has been received. If you purchase an electric car that has been reasonably well designed I am sure that you will have very satisfactory service from the Edison battery. Let me know what car you propose buying and I will tell you whether I think it is all right. If you have never had any experience with storage batteries you probably will not fully appreciate the good points of the Edison battery, but I am sure if the battery is given proper attention that you will have no occasion to regret buying an electric machine. Washington in fact is an ideal city for machines of this type. There can be absolutely no comparison between the electric automobile and the gas car so far as economy of operation, convenience, cleanliness, and general all around service are concerned, all of these factors being enormously in favor of the electric machine. With an A-6 Edison battery on the streets of Washington you ought to be able to get a mileage of from 75 miles to 150 miles per

#2 - Jas. K. Jones, Esq.

charge, or even more. We have run Anderson and Bailey cars over the roads of New Jersey, encountering pretty good hills with mileages up to 140 miles and the Baker Company recently operated one of their cars over the streets of Cleveland and obtained a mileage of over 200 miles. We are guaranteeing the Edison battery when used in commercial trucks to last at least three years, and since the service in a pleasure vehicle is not so hard on the battery you ought to get considerably longer life. The ordinary lead battery cannot be depended upon for much longer than one year. I believe that when the public comes to an appreciation of the Edison battery it will be used exclusively in the operation of electric vehicles.

Yours very truly,

FID/ARK.

Vice-President.

TELEPHONE MAIN 822

LAW OFFICES OF  
JAMES K. JONES  
621-622 COLORADO BUILDING  
WASHINGTON, D.C.

September 21, 1910.

Frank L. Dyer, Esq.,  
The Edison Storage Battery Company,  
Orange, N. J.

My dear Mr. Dyer:

Your letter of Sept. 20th is received. I have had a Columbia electric car for about three years - or, to be exact, I have had two of these cars. The one I now have I purchased in May 1906, and the garage people tell me I must have a new battery put in. It therefore occurred to me that instead of putting a new battery in this car, I would buy a Columbia car of the 1911 type, which is made so that the Edison battery may be installed.

The agent of the Columbia car tells me that the lead battery in the 1911 car will make about 75 miles on a charge. The battery in use in the present car when new will make about 50 miles, but if the Edison battery is a decided improvement over the old battery I want to use that instead of the lead battery. It was for this reason that I wrote you for the information which you so very kindly sent me in your letter of yesterday.

This Columbia agent tells me he can deliver a 1911 car with an Exide battery which will make about 75 miles on a charge for \$1750, but the same car with the Edison 8 A battery will cost about \$2400. It would appear to make the Edison battery cost \$650. more than the Exide battery, though you get more mileage out of the Edison battery

F. L. D. - 2.

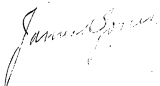
and it would probably last longer.

I note you state you guarantee the commercial truck for a period of three years, and that you think a battery in a pleasure vehicle ought to have a longer life. I assume from this, therefore, that you do not guarantee a battery when in use in a pleasure vehicle.

I note that the Baker people have operated one of their cars over the streets of Cleveland and obtained a mileage of something over 300 miles. I do not care for the Baker car, however, but I am very partial to the Columbia. It would seem, though, that the battery ought to perform in a Columbia car fully as well as it does in a Baker or in an Anderson & Bailey.

With many thanks for your courtesies in this connection, I am,

Yours very truly,

A handwritten signature in dark ink, appearing to read "James H. Brown". The signature is written in a cursive style with a large, looping initial "J".

DR. FRANK G. LIGHTNER,  
SABINA, OHIO.

Auto

Ans 9/15

New Electric Autos cost at  
present 1400 to 2500 - but 2nd  
hand ones sell from  
SABINA, OHIO.  
Sept. 21st. 10.

Mr. Thos. A Edison, 150 to 600,  
Orange, N.J.

Dear Sir: I am an Ex. Tel. Opr., and several years ago worked with  
you in the Cinti. Ofc. (0) I am wanting a good used Elec. Auto. if  
can find one costing me not over \$600.00 and thought perhaps you  
might help me to find it? IF SO THE KINDNESS WILL ALWAYS BE  
REMEMBERED.

Hoping to receive word from you, I am

Yours frat'

Frank G. Lightner.

fax

861

Sept. 23, 1910.

James K. Jones, Esq.,  
621 Colorado Building,  
Washington, D.C.

My dear Mr. Jones:-

Your favor of the 21st inst. has been received. So far as I know the Columbia car is entirely satisfactory and I understand the 1911 type has been built to take the Edison Battery. We have not made any tests with the Columbia car, but I see no reason why it should not work as satisfactorily as any of the other cars with which we have made careful tests. I am informed that the manufacturers of the Columbia car are very closely affiliated with the Exide people in Philadelphia, so that I do not think they are particularly anxious to put in the Edison battery unless they have to. If you cannot make a satisfactory arrangement with the agent of the Columbia car in Washington and still feel that you would like to use the Edison battery, I would suggest that you purchase a car without batteries and have them make a suitable allowance to you for the battery. An allowance of at least \$200 should be

#2 - James K. Jones, Esq.

made and perhaps more, which would bring the cost of the car to you \$1550 and perhaps less. You could then purchase the battery directly from us. The cost of forty A-6 cells of Edison battery would be \$800. It is a fact that while we guarantee the battery for use in commercial trucks we do not make a guarantee for use in connection with pleasure vehicles, for the reason that in the case of trucks we can keep a reasonably close supervision over the installation, but in the case of pleasure vehicles it is impossible to do this. However, in view of our own personal relations, should you purchase an Edison battery, I would, of course, see that you receive every consideration, and I am quite sure that you would not be disappointed with it. With the experience you have had in the operation of electric cars I know that you will be more than pleased with the enormous advantages of the Edison battery.

Yours very truly,

FLD/ARK.

Vice-President.

hab-1124

Can see date  
any time  
add in to Edison's  
October 21st 1910  
My dear Mr. Edison:

I and some of my friends have become interested in the development of an invention of Mr. Chas. R. Pratt, with whose reputation as mechanical engineer you are perhaps familiar.

The device is known as "rotary piston unit", and is applicable to all the principal forms of power transmission, among them power driven vehicles.

I remember when you were here some months ago you said something about being interested in power driven vehicles for hauling freight. I think Mr. Pratt's device would be well adapted to that kind of vehicle. He has just completed and is about to install a unit for trial on a London bus.

He would like you to see the device, or his drawings, and to have an opportunity to explain it to you. He expects to sail for Europe the latter part of next week. I feel sure that you will be interested in the device and that it would be worth your while to look into it. Would you be willing to make an appointment for Mr. Pratt at Orange on Monday, Tuesday or Wednesday of next week? I will endeavor to accompany Mr. Pratt if you have no objection.

With kind regards.

Yours very truly,

Mr. Thos. A. Edison,  
Llewellyn Park,  
Orange, N.J.

Chas. O. Bruck



*The Baker Motor Vehicle Co.*

MANUFACTURERS OF

**ELECTRIC VEHICLES.**

R. C. WHITE, Presy.  
F. D. WHITE, Treas. & Gen. Mgr.  
S. C. HORTON, Secy. & Treas.  
O. S. HEDGE, ROOM Sales Mgr.

Edgewater Park and L.S. & M.S. Ry.



CABLE ADDRESS:  
"BAKER CLEVELAND"  
WESTERN UNION - ATLANTIC CODES.  
A.B.C. FIFTH EDITION.

*Cleveland, O., Nov. 7th, 1910*

Mr. John R. Anderson, Jr.,  
The Edison Laboratory,  
Orange, N. J.

Dear Sir:-

Your letter of Nov. 4th at hand. I beg to say that our test Victoria in New York is equipped with a 45 volt motor, and I have sent material to our New York representative with which he can increase the speed of the motor on short notice sufficient to obtain a greater number of miles per hour on any test run Mr. Edison cares to have made. As I stated to Mr. Edison before, I gladly will consent to any test he suggests, and have issued instructions in this respect to our New York agent.

Yours very truly,

The Baker Motor Vehicle Co.

G.-No.1.

*Chas. H. Henshaw*  
Chief Engineer.

12-11-1910 142  
November 25th, 1910.

Mr. Frank L. Dyer.

Dear Sir:-

The Columbus Buggy Company up to the present time have only bought one A-4 battery - 40 cells. This they returned to us and we sent them in exchange 40 A-6's which they paid for. We know they have made a test as our Mr. Frayer was there when some of it was going on. They agreed to send us copies of it but they have never done so and we have not heard any further from them in regard to Edison batteries, and we don't expect very much from them, but if you are in Columbus it would be well for you to call on Mr. Firestone, Sr., and have a talk with him, and you might mention that we have received from Anderson since last February \$136,000.00 for Edison batteries.

Regarding the R & L situation. They or their agents are still knocking Edison batteries very hard, and they have paid for up to the present time, seven sets 40 A-6's. I have been told that they have renewed their contract with the Exide people for 1911. Also have been told that Mr. Rauch was a stockholder in the Electric Storage Battery Co., this may be simply hearsay, however.

Studebaker I think we had better let rest. The delivery wagons and trucks that they have are out of date and with the possible exception of their small delivery wagons we do not care to put in Edison batteries, in fact we could not do so to good advantage. We have recently refused to accept orders for batteries with which to equip their 2,500-lb. vehicles. There are all sorts of rumors about these people, some are to the effect that they are going out of the electric vehicle business, another is that they are going to build a large plant in South Bend and were going to push electric vehicle business. What I should recommend is not to bother with them at present and when we are in shape to get out our orders promptly then we might push them through other channels, viz., Morgan & Co.,

Woods Motor Vehicle Co., I think is out of the question as we cannot interest them further with Edison batteries; better let them rest until the public demand that they furnish vehicles equipped with Edison batteries.

Strongly recommend, if you go to Detroit, that you call up Mr. Anderson on the phone with a view to getting a general talk with him regarding the situation.

WGB/B1.  
H.B.

Rev. Ed. Hand

Philadelphia, Pa; November 27, 1910.

Thomas A. Edison Esq.,  
Orange, N. J.

Ans 11/29

Dear Sir:-

A short time ago a Philadelphia paper published that you intended to put an Electric Family Pleasure Car on the market, which would be a car for the middle class <sup>of</sup> people, inexpensive to maintain and low in price.

If I am not imposing too much upon your valuable time and generosity, would you kindly let me know what the selling price of this Electric Vehicle will be, and how soon you will put it upon the market, how much it will cost me to run it, and how many miles it will run before it requires recharging.

Thanking you in advance for your courtesy, I am

Yours very truly,

1359 Arch St.  
Philadelphia, Pa;

*Story that the  
statement was made  
of only up battery  
Electric Vehicle  
Undoubtedly the  
price of electric  
will be in time  
much less  
than now*

Automobile

F. A. BABCOCK, President & General Manager.

FRANK L. BAPST, Vice President.

HARRY VATES, Treasurer.



F. L. PERLEY, GENERAL MANAGER & SALE

OFFICE & SALESROOM,  
226 W. UTICA ST.

*Buffalo, N.Y.* Dec. 7, 1910.

Mr. Thomas A. Edison, President,  
The Edison Storage Battery Company,  
Orange, N. J.

DEC 8 - 1910

Dear Sir:--

The writer has just returned from his vacation of several weeks, and notes that you are doing quite considerable advertising in the papers relative to your battery and the Electric vehicle manufacturers that are using it, and we observe that our name is not included in the list of those that are ready to install your batteries when wanted, and we feel that this is hardly fair to us.

We will agree that we have not been able thus far to produce the results with our cars with your battery, that we are so anxious to do, but that we are ready and willing to equip any of our cars with your battery, is a fact, and we feel that in justice to ourselves, the least you can do is to include our name amongst the other makers.

We assure you that as soon as we can make some changes in our electrical equipment (we refer especially to the motor), we expect to be able to dispose of a goodly number of sets of your batteries. In the meantime we are advising our agents and all inquirers that we are ready to furnish Edison batteries where wanted.

With the writer's personal regards, we are--

Yours very truly,

BABCOCK ELECTRIC CARRIAGE CO.

*F. A. Babcock*  
President

REFER TO THIS NUMBER  
IN YOUR REPLY

1613

MEMORANDUM

FRANK L. DYER,  
CHANCELLOR

Mr. Bee:

12/13/10.

When in Detroit on Thursday I met the Treasurer of the Lozier Motor Car Co. and had a little talk with him. I mentioned particularly our new sparking batteries and told him that at the price the Lozier cars were selling they should be equipped with the very best and highest type of accessories and that they should use the Edison batteries. He said that they had thought of doing so, were interested, and would be glad to look further into it. I wish, therefore, that you would arrange to send one or two trial sets of sparking batteries to Mr. Anderson as soon as possible and have him turn them over to the Lozier people in order to test

(2)

them out. Of course this wants to be done just as soon as possible, and you want to be certain that the batteries are in good shape.

F. L. D.

2211 PARKWOOD AVENUE  
TOLEDO, OHIO.

December 26, 1910.

Mr. Thomas A. Edison,

Orange, N. J.

DEC 28 1910

Dear Sir:-

I regret exceedingly that before leaving Orange, I did not have an opportunity to thank you for the much appreciated photograph which, thru your kindness, reached me by the courtesy of Mr. Hutchison.

This photograph, as it hangs in my study, will be an ever present reminder of the greatness of your works, and will add to my desire to help make the Edison Battery and the Battery Car one of your greatest and most successful aids to commerce and humanity.

Your caution, as to not overloading any Battery Car installation financially, will be strictly observed, so that our record will consist of paying propositions and not of failures.

Assuring you of my great appreciation of your kindness and the courtesy of your assistants, I am,

Very respectfully yours,

*Ralph W. Hill*

The Waverley



ELECTRIC  
CARRIAGES, DELIVERY  
WAGONS AND TRUCKS

## THE WAVERLEY COMPANY

INDIANAPOLIS, IND., U.S.A.

December 29, 1910.

Mr. Thos. A. Edison,  
Orange, N. J.

Dear Mr. Edison:

A very interesting article by you appears in the "Carriage & Wagon Builder" for December, and I hope you will not take offense if I take exception to the article to this extent:

You refer to the light weight delivery wagons and to the fact that the commercial vehicles now being manufactured costing from \$2,000 to \$3,000 each are absurdly high in price.

We build our own controllers, motors, and in fact nearly all the car, except the battery, but taking the standard prices for these articles and adding thereto the price of the battery, it does not seem that the time is ripe when a one ton wagon can be sold for much less. A really light car such as you are talking about would, of course, be considerably less, but even then the component parts, including tires, would run the price way above \$600 or \$700.

How can we who are trying to displace the horse and create a wider market hope to do so if such a great authority as yourself makes a public statement that our prices are too high and that it never can be done. Prices can only come down as the output is increased sufficiently to bring about lower manufacturing costs. It seems to me the only

*Yours of Dec 29  
Read, I would very much*

*like to know you could*

*Want to justify that article  
from some laboratory when  
you come to show-*

*to tell for something for your  
own benefit*

*2*

THOS. A. EDISON.....#2.

way that the output can be increased is by talking up the present cars until both you and ourselves can reduce the cost of our product because of our greater output.

I only call attention to this matter as one equally interested with you in popularizing the electric delivery car.

I hope I may have the opportunity of meeting you again at Show time. I enjoyed exceedingly my call at your laboratory last winter.

Yours truly,  
THE Waverley Company.

*H. H. Rice*  
Vice-Pres. & Manager.

HHR-3

ARTHUR WILLIAMS  
FIFTY-FIVE DUANE STREET  
NEW YORK

29th December 1910

Thomas A Edison Esq  
Llewellyn Park,  
New Jersey

DEC 30 1910

Dear Mr Edison

It gives me a great deal of pleasure to acknowledge the receipt of your favor of the 24th instant. The garage question has been receiving considerable attention, though as yet nothing definite has been done. I shall bring the matter to Mr Brady's attention at the earliest possible moment.

You will be interested to know that Mr Brady has taken the chairmanship of the Advertising Committee of The Electric Vehicle Association of America. One meeting has been held, from which I am strongly of the opinion that the movement is going to be very successful.

With best wishes for the New Year, believe me,

Sincerely yours

Arthur Williams

## ~~THE~~ ELECTRIC AUTOMOBILE with the:

### NEW EDISON BATTERY

~~The simplest & most reliable~~  
No chauffeur, reliable, small  
expense to maintain, simply  
a carriage propelled by  
the simplest & most reliable  
of all prime movers The  
Electric motor.

The electric vehicle for trucking  
operations ~~was~~ would have  
has been kept back for years for  
want of a reliable storage  
battery. Edison has filled this  
gap by his new battery.

Nothing now prevents the rapid  
progress of Electrics

Gasoline costs \$2 per ton  
& the price is increasing  
2 tons of coal lumped into  
Electricity and stored in an  
Electric will give as much  
power as a ton of Gasoline  
9 dollars instead of \$32.

✓  
An Electric Motor will  
run 10 years with repairs  
The battery will last for  
years, all our street cars  
are run by electricity,  
soon the large steam roads  
will adopt electricity as  
the Penna, N.C. & Nicholson  
have adopted it for their  
terminals, & the Great  
Northern & Canadian Pacific  
for hauling their trains  
over the Rocky Mountains.  
No one sees trolley cars  
broken down, they are always  
in order, look at Broadway  
with its miles of trolley  
cars close together, if one  
breaks down the whole  
system is stopped, ~~to~~

3

How many times did you  
ever see this again. ~~However~~

~~no difference between~~

suppose these cars were  
1 or more would certainly have trouble  
gasoline driven ~~that would be a~~

do you think that kind of ~~stalled~~

transport would be a success

There is no difference between

on "Trolley Car & <sup>Electric</sup> Truck

except the truck is even

more valuable if it has a

good battery for it has its

own power whereas they

Broadway car must get

its power from the under

Trolley station. Once in

a while there is trouble at

the station & the power is

shut off for an hour or 2

in a year, not even this

occurs in a truck. It

is the same the the family

Electric,

200

60

300

200

4

gasoline driven cars either truck  
 taxis or truck have no legitimate  
 place in City Traffic. Touring  
 in the Country is the true place  
 for the gas car, expense for fuel  
 & repairs is not a serious item  
 to the man who can afford the  
 great pleasure of touring but  
 when he returns to his business  
 in the City, this no longer applies  
 in his business, it becomes then  
 a business proposition where cost  
 is the prime factor. ~~And the~~  
~~gas car is not the gas car~~  
~~the gas car~~ the gas car  
 cannot possibly stand or  
 come anywhere near passing  
 this ordeal, it is only the  
 electric that will do that  
~~that will do that~~  
~~that will do that~~  
 As the Electric Street Car  
 has displaced horses so  
 will the self propelled Electric  
 displace them in every other  
 kind of City Traffic

Rev. Ed. Hand

My Dear Hogan

The battery is all right, they  
are going into family Electric  
at a great rate

I am testing out two makes  
~~the~~ by daily runs of ~~the~~

to 85 to 110 miles on the  
Macadam & dirt roads  
level & in the Mountains

both Vehicles on what is  
called the long charge of the  
battery do 140 miles <sup>on one</sup> ~~charge~~

charge on fair Macadam  
& 112 miles on ordinary or  
rated charge, but this is  
by Experts who get every  
mile possible. 116 on long  
charge & 90 miles on short or

ordinary charge could  
be done by ~~any~~ ~~anybody~~  
anybody - ~~the~~ ~~these~~ These Experiments  
prove that with these  
Brougham 2 persons  
can go out in the Country  
all day & return with  
plenty of mileage left

The only family Electric  
that have changed their  
wheels & adopted proper  
receptacles for the new battery  
are the two builders The  
Machens which I am  
testing others <sup>builders</sup> will make  
necessary changes in  
the face

One is built by the  
Anderson Carriage Co  
of Detroit Michigan

The Other by S R Bailey  
Amesbury Mass,

I am afraid I shall not be  
able to come out to the  
meeting - This Gaitery keeps  
me on the jump -

Yours Truly

A. W. W. W.

Anderson

50¢

Tell Anderson

I took the Auto  
Club Touring Book

& some maps he

can buy all them

Edson

Edson

**1910. Automobile - Anderson Carriage Company (D-10-02)**

This folder contains correspondence and other documents relating to the use of Edison storage batteries in electric vehicles made by the Anderson Carriage Co. in Detroit, Michigan. Included are notes by Edison regarding the weight and efficiency of the vehicles, as well as correspondence with William C. Anderson, president of the company, about the outfit, performance, and promotion of its Detroit Electric automobile.

All of the documents have been selected except for duplicates.

auto



THE  
**Anderson Carriage Co.**

MAKERS OF

*THE  
Detroit  
Electric*

OUR ELECTRICS WILL RUN FARTHER ON  
ONE CHARGE THAN ANY OTHER IN THE WORLD



Detroit, Mich., Jan'y. 8, 1910

Thos. Edison, Esq.,

Orange, N.J.

Dear Mr. Edison:

I am much pleased to acknowledge receipt of  
your beautiful catalogue and I have carefully read the same  
and in return take pleasure in mailing you our catalogue  
describing our proposition and illustrating our nine models.

The writer leaves for New York to-morrow and shall  
arrange in some way to call upon you before returning, as I desire  
to have a personal interview with you and also have both of our  
engineers accompany me.

Yours very truly,

*H. Q. Anderson*

Catalog-

146 Hawley St.  
Binghamton Ny

Battery-  
TAG

The Edison:

~~say~~ <sup>former</sup> say I am not  
personally acquainted with the  
Edison Electric Works or with the man  
by the name, but from what our  
Battery people say the Edison  
light is a good one  
have since

55 10 1910

Aug 2/17/10

watching with great  
interest the development  
of your electric battery -  
see, I hear the Ande-  
son Carriage Co. are  
using them in their  
Detroit Electric cars.

so I am much in-  
terested in that case  
& will be most  
grateful if you  
will tell me, if  
you approve of the  
Parker, Edw. H. H. H. H.  
and controller they  
are. Thanking you  
most sincerely

Very truly  
(Edw) Marietta J. C. Fort

February the ninth -



THE  
**Anderson Carriage Co.**

MAKERS OF

**THE  
Detroit  
Electric**

OUR ELECTRICS WILL RUN FARTHER ON  
ONE CHARGE THAN ANY OTHER IN THE WORLD



*Dyn*  
Detroit, Mich., May 18, 1910

Thomas A. Edison, Esq.,

Orange N.J.

Dear Mr. Edison;

I am enclosing you herewith a page taken from The Central Station magazine and would like to call your attention to the manner in which the Electric Storage Battery Co. strike us between the eyes. You will note every maker of electrics in this country is mentioned in this ad. They have kept up this method of trying to blackmail us for more than a year because we refused to sign their contract which you are familiar with.

We are compelled to use a few Exide batteries. Last year we paid them about \$30,000. but this year we doubt if we will call on them for over \$10,000. You will note they have exceeded the limit in order to get a long list of makers. Below we will estimate for your information the number of cars each one of these makers build.

Baker Motor claim (and I guess it can be depended upon) they will make this year, 600;

Bailey, you are familiar with his output and I doubt if he has ordered from them more than 3 sets of batteries in a year;

Broc Electric, Possibly,	75;
Columbus Buggy,	500;
Champion Wagon, possibly,	trucks, 50;
Couple Gear,	50;
Columbia Motor Car, estimate,	100;

Elkhart Carriage have never built an electric as yet;

General Vehicle, you are familiar with;

Ideal Electric, started to build 100 and

Chicago papers claim they are in receiver's hands;

Kimball, Chicago, built 9 cars last year and is out of business this year, handling R & L of Cleveland;

THE ANDERSON CARRIAGE CO.

Thomas A. Edison

Page -2-

Rauch & Lang claim they will build, but we doubt if they exceed.	800; 500;
Studebaker, pleasure end, if possible, Waverley, between 500 and Woods,	100; 800; 350.

This advertisement is a strong appeal to the people and we are frequently asked why we don't use the Exide battery, but we determined upon the open door policy, namely; not to tie up exclusively to any lead battery. We are the ones they are fighting in their periodical ads, claiming to supply 80% of all the batteries used in electric cars. They know our output will equal two of the largest builders they advertise and it makes them feel awfully sore and it also makes them feel sore to think they can hypnotize or tie up all of the other makes but the Anderson Carriage Co.

On the opposite side of this page, you will see our ad. We regard this as a pretty strong appeal. It is a hard thing for them and no doubt makes both the storage battery and electric car builders feel terribly sore but it is just as the writer stated when down there, you will never get your battery on the market unless you advertise it and make the public demand the manufacturer to put it in a car. We have taken the lead and are willing to do so but we want your co-operation in every way and you ought to assist us to the extent of at least \$15,000 to put half page ads in all of the leading daily papers in New York, Cleveland, Buffalo, Rochester, Detroit, Toledo, Chicago, Denver, in fact covering the whole country. A large well written ad filled with cuts of the battery and saying to the world, you are ready to deliver batteries. It need not be stated in the ad, if you do not wish it, that we and Bailey build a line of cars that will receive your battery, - we are not particular about that, but tell the world that your battery is ready and is being used by several of the leading manufacturers or something along that line.

Every day and hour that I mix with our home people, I am asked the question, what is this I hear about Edison's battery? Are they ready to say it is all right and are they ready to make deliveries? The public has been lied to by reporters for the last 5 to 7 years to the effect, you had built a battery and got it well in their mind that on account of its not being followed up and used as it is now being used by us, that it was a failure. Make it you are in touch with what the public feeling is. A strong well written ad, setting forth what your position has been in the past and is at

THE ANDERSON CARRIAGE CO.

Thomas A. Edison

Page -3-

present, would start up a demand here that would just everlastingly stop this nasty talk. If they cannot stop an intending purchaser from buying on the claim you have not sufficient voltage and you could not go up a hill, they will start the story now in Summer, that in Winter your battery freezes and it is impossible to use it in cold weather and so on. They have a dozen or more ways to embarrass us and keep us on the defense all the time. To review the silly inquiries we received would convince you that the public is as ignorant as a flock of sheep.

If my idea appeals to you as being right, that instead of spending a large portion of your money in the periodicals, that a good share of this be thrown into the public press, would like you to advise me. You can get large and extended write-ups in every paper with a fair sized ad. Hundreds of thousands of people will see it and read it and it will start them to talking your battery and will to a great extent stop the infernal misstatements. A guarantee such as we put out in our advertisement can be so worded that it will protect you and protect us. Here in this city when a man questions the battery, I immediately say to him, we are responsible and our warranty is good when we sign it and we are ready to sign it upon certain conditions, to the effect that the Edison battery will give you 50,000 miles without expense other than the renewal of the solution, etc.

Mr. Dyer has been here and looked our facilities over and can explain, and no doubt has by this time, that we are in a position to handle the business. If he has visited the other makers, he can undoubtedly make some comparisons that will be of interest to you. Our selling agencies throughout the country are made up of the highest class dealers and we are in a position to give you a volume of business that will surprise you. We can just as well sell 100 sets of batteries a month as to be selling the number we are now, if two things are done, namely;

A reasonable amount of judicious advertising through the daily papers and it is done now and let us co-operate with you.

Second; Keep us supplied with batteries. The idea of our trying to handle our business on a stock order of 25 batteries is ridiculous. We have lost the sale since I was in Orange and held up shipments of several cars. Only one of the three shipments that was booked for us has arrived. Orange is located badly for Detroit so far as railroad connections are concerned. It is reported that you have only a local depot and it takes longer to get a shipment out of

THE ANDERSON CARRIAGE CO.

Thomas A. Edison

Page -4-

Orange into Buffalo than it takes from New York to Chicago not only account of your depot being a local one and but one freight a day, but the fact they run them into Buffalo and there they are transferred and delayed and held up and then they strike another local out of Buffalo instead of a through freight. I am going to have our commercial man look this up. Our opinion is now that these shipments should be routed, now that navigation is opened, via Buffalo o/o D & B boats which leave Buffalo every afternoon at four o'clock and arrive here the next morning. Further information regarding this we will have sent to your company.

Hoping this will have yours and Mr. Dyer's careful consideration and we will hear from you by return mail as to what your ideas are in the premises, we remain,

Yours truly,

W.C.A.

Enc(Clipping)

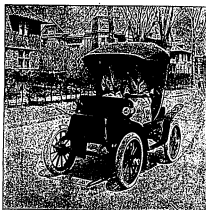
By

[ENCLOSURE]

52

THE CENTRAL STATION.

## This Car Convinced the Experts



(Cut No. 2)



(Cut No. 3)

**THE**  
*Detroit*  
**ELECTRIC**

A more sincere tribute was never paid to the high standard of this electric than its choice by fourteen makers of gas cars for their private garages.

The luxurious trappings, the generous proportions of the Detroit challenge your admiration; but these manufacturers demanded more than grace of line—they had to be convinced of the mechanical worth of the car.

The Detroit is not merely a thing of beauty—it is a

joy to depend on for pleasure and service over town and country.

In the Munsey Tour the Detroit, the sole electric entered, won the only official certificate ever issued to an electric in a reliability run. The Detroit will carry you anywhere an auto may go with a mileage radius on a single charge farther than you will care to tour in a day.

Every one of our nine models comes to you completely fitted for your comfort and convenience.

They range in price from \$1650 to \$2500.

The Wizard used nickel and steel and made a battery of lighter weight and greater ampere-hour capacity, thereby materially increasing the mileage efficiency.

**Good for 50,000 Miles —  
The Edison Battery**



*Thomas A. Edison.*

This battery is indestructible. It cannot deteriorate or sulphate and may stand indefinitely without re-charging. All the care it needs is to "water it" and "feed it" once a year with a solution of caustic potash.

Let us send you literature that will convince you as to the possibilities of pleasure and service you may get out of a Detroit.

**Anderson Carriage Company, Dept. C.S., Detroit, Mich.**

[ENCLOSURE]

THE CENTRAL STATION.

51.

## Sixty-Seven Million K. W. H. to be furnished

This will be the approximate demand made this year upon Central Stations for charging current to supply 10,000 Electric Vehicles that will be sold. These vehicles are bound to be used in the towns where the greatest efforts are made to popularize the "Electric."

Many Central Stations have been active in aiding to sell "Electric" and have earned big incomes from charging them. One station last year sold \$25,000 worth of current for this purpose alone. Remember the Electric Vehicle furnishes an "off peak" load.

Here is a list of the leading electric vehicle manufacturers. They all use our battery—the "Exide":

Baker Motor Vehicle Co.,  
S. R. Bailey & Co., Inc.,  
Broe Electric Vehicle Co.,  
Columbus Tuggy Co.,  
Champion Wagon Co.,  
Couple Gear Freight Wheel Co.,

Columbia Motor Car Co.,  
Elkhart Carriage & Harness  
Mfg. Co.,  
General Vehicle Co.,  
Ideal Electric Co.,



The "Exide" Battery

C. P. Kimball & Co.,  
Rush & Lane Carriage Co.,  
Studebaker Automobile Co.,  
The Waverley Co.,  
Woods Motor Vehicle Co.

Would it interest you to know what other Central Stations are doing to push the electric? Write us and we will show you how to popularize the electric in your town.

## THE ELECTRIC STORAGE BATTERY CO.

1888 PHILADELPHIA, PA. 1910

New York Boston Cleveland San Francisco Chicago St. Louis  
Atlanta Detroit Denver Toronto



## Business Builders for the Central Station

Can you think of a possible user of an electric vehicle whose particular requirements would not be met by one of the ten

### WAVERLEY ELECTRICS

shown in the accompanying cuts? These are business builders for the Central Station worth thousands of electric bulbs, hundreds of flatirons and scores of arc lights.

Why don't you go after the business?

Exide, Waverley or National Batteries

Address for full particulars.

### THE WAVERLEY COMPANY,

Indianapolis,

INDIANA.





THE  
**Anderson Carriage Co.**

MAKERS OF  
*THE*  
**Detroit**  
*ELECTRIC*

OUR ELECTRICS WILL RUN FARTHER ON  
ONE CHARGE THAN ANY OTHER IN THE WORLD



Detroit, Mich., May 19th, 1910

Thos. Edison, Esq.,

Orange, N.J.,

MAY 23 1910

My dear Sir:-

Since writing you the longer letter enclosed my attention has been called to the two copies of advertising which the Waverly Company have sent out, which are enclosed. Both of these advertisements carry as far as the public is concerned your indorsement of the Waverly car. One advertisement is a reported direct expression of yours, and the other, a strong recommendation by reason of the fact that you drive a Waverly car.

What concerns us in this matter is the fact that here is a competitor of ours getting the benefit of your standing in the public and at the same time you are getting no benefit from these competitors by reason of their using your batteries. We are advertising you and your batteries without a personal recommendation on your part of the Detroit Electric being in our advertisement.

We would like to be able to place your indorsement of the Detroit Electric in our advertisement in connection with our indorsement of your batteries. What suggestion have you to make?

Yours truly,

*W.C.A.*

W.C.A.

[ENCLOSURE]

THE INDIANAPOLIS STAR, THURSDAY, MAY 5, 1910.



"Now that's the way to build a controller" --Thos. A. Edison

The story is the explanation of the veteran wizard of electrical science after carefully examining the Waverley Patented Shaft Drive Controller.

Mr. Edison himself is its owner and controller of a Waverley Electric Carriage at his beautiful home, Llewellyn Park, N. J. He has two Waverleys.

The Controller is the soul of your safety in an electric car. It must be instantly responsive and absolutely dependable.

There are four speeds forward and four reverse in the Silent Waverley. The interlocking device makes it impossible to start the car on any speed except the low, or to reverse the car with the power on.

No tampering with the handle—while you are out of the car—no carelessness whatever can cause a sudden starting of the car.

So simple is the Waverley control that you can learn it with one demonstration. And your little girl can run the car as well as you.

### The Silent Waverley Shaft Drive Has Years of Use Behind It

The silent Waverley is the shaft driven electric carriage—the product of 14 years of electric carriage manufacture.

The Waverley High-Intensity Shaft Drive (Patent applied for) is in its fifth year of road test, and third year of actual use in the hands of motorists.

Let us demonstrate the Waverley Silent motor, built to stand the greatest overload—the herring-bone gears with an efficiency of 75 per cent, against 50 to 55 per cent in other electric—the Waverley solid one-piece drop forged steel front axle made in our own factory.

Let us show you the beautiful Waverley bodies with patented drop sill, and unusual window space.

Try the easy riding but electric spring.

The Silent Waverley is the only electric especially designed for solid or pneumatic tires.

Radio, Waverley or National batteries as desired.

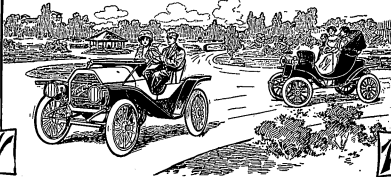
## THE WAVERLEY COMPANY

For 14 Years Exclusive Builders of Electric Carriages

139 South East Street

Indianapolis, Indiana

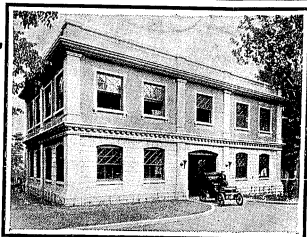
Also sold by HEARSEY-WILLES CO., 119 West Market Street



[ENCLOSURE]

THE INDIANAPOLIS STAR, SUNDAY, APRIL 24, 1910.

# The Silent Waverley —Electric



Mr. Edson's Waverley Leasing His Garage.

## The Car that Thomas A. Edison Drives

A Waverley Electric built in Indianapolis. This fact is convincing evidence that the mechanical and electrical features of Waverley construction satisfy the critical judgment of the highest electrical authority in the world. Speaking of the new Waverley Controller at a recent exhibition in New York Mr. Edson exclaimed, "Now that is the way to build a Controller."

Thomas J. Fay, another electrical expert, and Editor of The Automobile, made a careful examination and analysis of the performance of the New Waverley Motor and wrote of the results of his study: "A well balanced motor is what is desired; this characteristic as presented in the Waverley is of just such a well-balanced motor."

The mechanical efficiency of the Waverley Shaft Drive received a striking tribute the other day when the Harrington gear, which for use in marine turbine engines. Some experiments conducted by that Company developed the extraordinary results of 84.7 per cent as the mean average efficiency of this gear, a result that attracted marked attention from engineers and was fully described and illustrated in the Scientific American.

The Waverley experts have obtained equal results from the gear in use with their Shaft Drive, a system of transmission that has been in use on hundreds of Waverley carriages in the hands of owners in all parts of the country for nearly two years, and has given unexampled satisfaction to its users.

The problem of transmitting power from the motor to the rear axle with the least possible loss of efficiency (the most important problem of electric vehicle construction) has been finally solved by the use of this gear.

With these high endorsements of Waverley efficiency in mind consider the important fact that the Waverley factory is in your home city. The expert advice and assistance of Waverley engineers and electricians are always at your service if anything should by the slightest accident or mischance go wrong.

The Indianapolis owner of a Waverley Electric is newer at the mercy of an inexperienced or careless repair man, but may have at his call the skill, the science, the training of the oldest factory organization in the country now building electric.

Phone or call for a demonstration.

Exide, Waverley or National Batteries used.

Waverleys passing Harrison Monument, Industrial Parade of April 1st

## The Waverley Company

For 14 years exclusive builders of electric carriages.

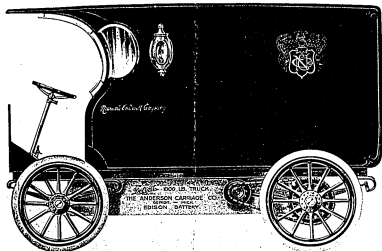
139 S. East St., Indianapolis

Also Sold by HEARSEY-WILLIS COMPANY, 113 W. Market St.

[ENCLOSURE]

## This Is One

This is one of the delivery wagons that we are building for the department store of the Newcomb-Endicott Co. in Detroit. A number of others of similar design are being made for Carson, Pirie, Scott & Co. of Chicago.



**THE**  
*Detroit*  
**ELECTRIC**

The capacity is 1000 lbs.—the wheel base 84 inches. The equipment consists of our specially designed motor with Edison Batteries. This car fully loaded for the entire distance has been run 93 miles on a charge about the streets of Detroit, at an average speed of over 12 miles an hour.

THE ANDERSON CARRIAGE CO.,  
Brushy 2nd Street,  
DETROIT, MICH.

[ENCLOSURE]

## Important to Merchants

Here are a few advantages of **The Detroit Electric Power Wagon** for you to consider in solving your delivery problem:

1. It cuts delivery cost in two.
2. Requires no chauffeur; may be handled by any driver of average intelligence.
3. Does not need a skilled mechanic to care for the car.
4. The Edison Battery is practically harm-proof due to its construction of nickel and steel. With ordinary care it will outlast the car.
5. It is free from insurance limitations; may be loaded on docks, in warehouses or shipping rooms; and may be garaged on the premises.
6. Anywhere that an electric may be used, the Detroit Electric Truck is the ideal delivery vehicle considered from the standpoint of low cost, cleanliness and care.

Ask our Agent or write direct to

**Anderson Carriage Co.**

**DETROIT, MICH.**



THE  
**Anderson Carriage Co.**

MAKERS OF  
*THE Detroit*  
ELECTRIC

OUR ELECTRICS WILL RUN FARTHER ON  
ONE CHARGE THAN ANY OTHER IN THE WORLD



Detroit, Mich. May 21st, 1910

Thos. Edison, Esq.,

Orange, N.J.,

Dear Sir:-

We thought possibly you would be interested in the way in which we ran an advertisement in a good many of the papers concerning yourself and the Hally comet:

We believe the results of the advertising materialized greater than Hally's comet, which certainly goes to make the public feel that you are greater than the comet. Every one feels that you have done more to make light shine upon the earth and been more successful in that regard than the comet was.

Yours truly,  
THE ANDERSON CARRIAGE CO.

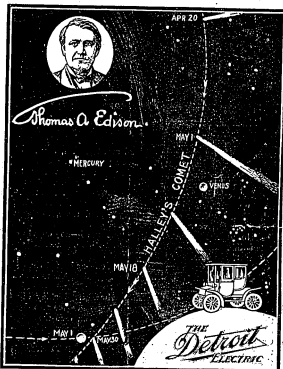
By *Wm. C. C. C.*

DIC.C.  
RHC. (ADVERTISEMENT)

MAY 23 1910

The brilliancy of this star has added to the lustre of

**THE**  
*Detroit*  
**ELECTRIC**



Thomas A. Edison, with the arts of peace, has done as much to revolutionize the social conditions of his times; as did Napoleon in his day with the sinews of war.

It needed a car like the Detroit, of national prestige, of flawless construction, to demonstrate convincingly to the world the revolutionary advantages of his last invention—the Edison Battery.

The original nickel-steel batteries tried out seven years ago are still giving service with undiminished efficiency.

But the success of the Detroit with this improved battery has passed even the expectations of its inventor.

From all points of the compass—from Shanghai, Manila, Berlin—eager inquiries have flowed into our factory—showing the world wide interests created by our efforts.

Right at your doors you have the facilities of our factory and two garages to show you the practical advantages of the Detroit and the Edison Battery.

**Anderson Carriage Co**

PHONE FOR DEMONSTRATION.

687-689 Woodward Ave.

112-4 E. Grand Blvd.

B&H 4-1015

AMS  
MAY 23 1910

W.C. Anderson  
Anderson Carriage Co

Delmar Wash

Yours of ~~the~~ May 23rd  
Reed = just wait 2 or 3  
weeks. I have taken hold  
of the business scheme  
myself. There will be a  
half time in the Electric  
Vehicle by in a delivery  
line in the next 2 months  
just watch, go ahead &  
sell, all you can & watch  
the fun. <sup>that otherwise it will set up a bad note as</sup> ~~contingency~~ under  
no circumstances must  
you fail to have that

"  
Test run vehicle here by  
the 1st of June as I  
will be ready for it,

Edson

(~~Edison 11.5 amp. 100 watt. 11.5 amp. 100 watt.~~)

MAY 24 1910

Anderson Chassis 1600 lbs - A4 40 cells: 48 V<sub>eff</sub> 168 <sup>amp. hrs.</sup>  
 wt 568 lbs with tray Total weight 2168 lbs.  
 8064 watt <sup>hours</sup> output + 3360 watt <sup>hours</sup> input (60% efficiency)  
 Mileage of vehicle alone at 100 <sup>watt-hours</sup> ~~cells~~ <sup>with battery</sup> per ton-mile -  
 74.4 miles. 1795 <sup>watt-hours</sup> per mile  
 180.6 <sup>watt-hours</sup> of eq. per car-mile

24 cells of  
 17 plate <sup>tray</sup> with trays weigh with vehicle 2900 lbs  
 10752 <sup>watt-hours</sup> output, at 100 <sup>watt-hours</sup> ~~cells~~ <sup>with battery</sup> per ton-mile - guess  
 74.1 miles - input 14300 <sup>watt-hours</sup> 193: <sup>watt-hours</sup> ~~with battery~~ <sup>per car-mile</sup>

If 2168 lbs is the proper weight with Edison  
 battery, with 2 persons added making  
 2468 lbs; Then with the lead battery vehicle  
 + 2 persons the weight will be 3200 lbs  
 This is 732 lbs too much or equivalent  
 to 6.8 <sup>comm.</sup> persons. The vehicle would breakdown

( 17 plate list # 415 33% 415 2.75  
 4044 " 540 20% 432  
 2 tons of 7 persons on (less 18 man. 19 miles) )

2

Anderson 1600 <sup>lb</sup> chassis - to not overload  
the vehicle but keep the strain & wear the  
same as 40A4 - a 7 plate axle must  
be used. The weight will then be <sup>approximately</sup> the  
same <sup>also less</sup>. The discharge rate will be  
50% above normal as against normal on 24 ft;  
& for a horse on grade -  
There will be <sup>3709 watt-hours</sup> 4032 watt-hours vehicle at  
100 <sup>watt-hours per</sup> ton-mile will give a  
mileage of <sup>34.3</sup> 37.2 as against 74.4  
miles <sup>with</sup> A4 + a <sup>50%</sup> 50% discharge rate <sup>50%</sup> above  
normal on the level.

The mileage will be less if Holland get Cienzo  
of dis. on 9 plate axle + V + amp at 50%  
higher - O.K. - I have this. Watt-hrs at  $1\frac{1}{2}$  normal  
rate is .92 of same at normal rate  
W.E.N.

If the wear & tear on vehicle a buggy is to  
be the same then the above mileage cannot  
be increased. If the discharge rate is to  
be kept normal the speed of vehicle <sup>about</sup>  
must be reduced from 15 miles hour to 11.

(3)

To reduce the discharge rate of 7 plate down  
to amp (to 20 or 21). The Carriage must be  
constructed in such a way as to be capable of its designed <sup>light</sup> or  
2 person + speed of 15 miles. Between too heavy  
discharge rate + overloading the vehicle  
there seems no way out, except running at  
low speed.

If <sup>the</sup> vehicle is designed to carry a 15 plate  
ride safely then the 1600 lb chassis will carry  
1170 lbs of battery or 2 people + lot 3070 total  
+ have 9408 <sup>with home of</sup> ~~ampere~~ watts 196 ampere-hrs.  
At 100 <sup>with things for</sup> ~~watts~~ to mile it will go 61.29 miles  
at 70 <sup>with things for</sup> ~~watts~~ to mile 87.6 miles -

With Edison 1170 lbs battery can be added, or  
43 A & cells. 336 ampere-hrs <sup>at</sup> 52 volts

giving 17442 watts. Therefore with 2 people  
and total <sup>weight of</sup> 3070 lbs same as lead, we get a mileage with  
same strain & wear on tires of (at 100 <sup>with home of</sup> ~~watts~~ to mile) 113.8 miles <sup>minimally or on</sup> long  
Chg Cap of 135.5 miles - if 70 <sup>with things for</sup> ~~watts~~ to mile 162.6 miles <sup>normally</sup>  
<sup>at a low charge</sup> 193.7 miles

4-

Or we can add 70 lbs for extra seat  
to chassis, put in 4 persons, put in  
40 A6 <sup>cells</sup> and get the same weight (3070 lbs.)

Strain of wear on tires, obtaining  
with 40 A6 on short charge in 1940s on long charge <sup>with 40 A6 on short charge</sup>  
12096 <sup>with 40 A6</sup> which at 100 <sup>with 40 A6</sup> ton-

mile <sup>with 40 A6</sup> 78.8 miles on short charge or  
93.5 <sup>with 40 A6</sup> on long charge at 70 <sup>with 40 A6</sup> ton-mile

1126 miles on short charge or 134 on long charge.

Bot-TAL

Reid & Ans  
June 18 - 10

Anderson

I have instructed Pitty  
Ree to send copy of runs  
of Bailey as well as your  
own to you that you may be  
informed of progress made.  
These tests are only  
preliminary ~~tests~~. When  
I make the real tests  
I propose having an  
official observer from  
the Auto Club with ~~you~~  
me to certify -  
I shall not run more  
than one carriage over a  
given route so public  
cannot discriminate between

2

Makers, you will notice  
that Bailey gets greater  
mileage, allowing for difference  
of weight. Your motor  
seems fine but you are  
handcapped by your ball  
bearings, which pull down  
mileage and also by pumping  
your tires to 80 lbs instead  
of 55 lbs as Bailey does.  
Hard tires & ball bearings show  
high on Asphalt, but on  
MacAdam & rougher, they are  
at a great disadvantage.  
There's a reason as Post says -  
Tests here on Asphalt gave a  
~~very~~ lower results  
for Bailey. If you had plain  
bearings & would pump

3

times to 50 lbs I think  
you would have Bailey  
whipped on mileage

Edman

Batter - TAE

Ans

June 18<sup>th</sup> 1890

Anderson

~~It~~ My correspondence  
both foreign & in this country  
is increasing on Electronics

& I make it a practice  
to send your Catalogue  
& Battery Catalogue

But it don't seem to be  
just right to send out your  
Catalogue where only the  
Lead Battery is mentioned

Do you intend getting  
out new Edition when  
I advertise the tests there  
will be a big demand for  
them & it wouldnt look  
well to use those I have  
what about it — Edison

[THIS LETTER, LABELED AS "CONFIDENTIAL," WAS SENT ON  
JUNE 22, 1910. SEE LETTERBOOK, LB-083, PAGES 216-220.]

*Call address "Edison, New York"*

*From the Laboratory  
of  
Thomas A. Edison,*

*Orange, N.J. June 21st 10.*

My dear Anderson:

The copy of a letter which you say was sent out by the Manager of the Atlanta office of a Lead battery company received. I wish to say that this is a first class sample of the lengths that the managers of modern methods of business will go to in disparaging a competitor. For mendacity and untruthfulness this letter may be considered the limit.

I will, for your benefit, analyze their statements to show you how dishonest it is, and what a silly attempt it is to think they can any longer make dishonorable statements to the public without being found out.

"Anderson Brougham--

Weight chassis	1585 pounds,
Weight with Edison battery "40 A-6	2400 "

This battery will drive this vehicle 132 miles on a fair MacAdam road, with some hills and low grades when the battery is fully charged, - and 110 miles over the same road when rated capacity is taken out."

Now take out the Edison and put in the Lead battery of the same weight, so that the chassis shall not be overloaded. This will be 24 cells of M.V. 11 plates. This battery gives 6720 watts, which at 96

[THIS LETTER, LABELED AS "CONFIDENTIAL," WAS SENT ON JUNE 22, 1910. SEE LETTERBOOK, LB-083, PAGES 216-220.]

W.C.A.

■ 2 ■

watts per carriage mile just gives 70 miles instead of 112 at my rating, and 132 full capacity.

Now how do these people do to make a showing.  
They put in 40 cells of the battery in their figures  
knowing that the motor is only made for 24 lead cells  
and such a battery could not be used at all. ~~What~~  
~~itself shows the streets they are under to make a~~  
~~showing.~~ The Vehicle -

Even if they could put it in and changed the motor so carriage could be controlled, ~~they~~ they run up against the weight. They understate their weight by leaving out their heavy trays, but leave them in the Edison and make other false statements as to the number of Edison cells, by making it 43 whereas only 40 are used.

Now about the weight:-

Edison weight with trays	814 pounds.
40 MV 11 with trays	1490 "

Now if the Anderson carriage is right for 40 "A6" Edison <sup>than 54</sup> cells, ~~and~~ putting in 40 Lead cells there would be 676 pounds overload. This is like adding four extra persons in addition to the two or three persons <sup>which the V</sup> ~~which the V~~ <sup>can</sup> ~~can~~

~~Regarding the theft of property:~~ a photograph of your vehicle with 7 persons hanging on it wouldn't look very practical.  
Regarding the other statements about phones:

In the impossible case they cite both Batteries have the same capacity. Now what becomes of the alleged economy when 22 per-cent of the total charge in their battery is used up in pulling the 675 pounds extra weight around.

They have no such efficiency as they state.

[THIS LETTER, LABELED AS "CONFIDENTIAL," WAS SENT ON JUNE 22, 1910. SEE LETTERBOOK, LB-083, PAGES 216-220.]

W.C.A.

- 3 -

<sup>in W.C.A. + Company</sup>  
Their average efficiency is about the same over the whole life of the battery as the Edison gives over several times the period of the life of the Lead battery.

A Lead battery commences to deteriorate mechanically the moment you buy it. ~~The Edison battery~~ <sup>They</sup> make this statement themselves.

Witness Instructions Appended Hereto:-

Under article on "Condensed Instruction for the Operation of Exide and Hycap-Exide Batteries."

"As a battery is used, a deposit (sediment) collects in the bottom of the jars, due to the gradual wear on the plates. Great care should be exercised that the sediment does not touch the bottom of the plates, thereby short circuiting them and materially shortening the life of the battery. Before this occurs, the cells should be cut apart and the sediment removed. It is impossible to state definitely at what intervals the sediment should be removed, as this depends on the work the battery does and the care it receives."

To determine when to remove the sediment, it is advisable, after the battery has been charged fifty times, to cut out for inspection one cell from the center of the battery. Then, from the height of the sediment, estimate when it should be cleaned out, making the estimate safe by a sufficient margin to insure cleaning before the sediment can possibly reach the plates. The sediment should be removed when it has accumulated to one-quarter inch below the bottom of the plates. As an example, suppose the jars have ribs in the

If your vehicle was designed to carry the extra weight of the lead battery at its very lowest capacity of these battery would be used to pull the extra weight over that of the Edison. Talk of 50 times is ridiculous.

[How can one estimate when the owner of a vehicle to know this is it expected to have an expert or depend upon the gasoline pump man in majority of cases know nothing about a battery]

[How can one estimate when the owner of a vehicle is to be put to court to know]

[THIS LETTER, LABELED AS "CONFIDENTIAL," WAS SENT ON  
JUNE 22, 1910. SEE LETTERBOOK, LB-083, PAGES 216-220.]

W.C.A.

- 4 -

bottom one and three-quarters inches high, the sediment should be cleaned out when it becomes one and one-half inches deep; so, if, after having been charged fifty times, there is found one-half inch of sediment, then, at the same rate of deposit, cleaning should be done after the battery has received 100 additional charges, or a total of 150; but on account of the more rapid rate of deposit with age, it is necessary to make an allowance, say 20 per-cent, which would mean cleaning after a total of 120 charges. If, after 50 charges, three-quarters inch of sediment be found, then the battery should be cleaned after a total of 100, less 20 per-cent, or eighty charges, (thirty in addition to the original fifty)."

Here we have a  
stone house from  
the debris of  
destruction]

These instructions <sup>are</sup> necessary  
by a private owner  
are never carried out  
they are impracticable  
+ the same old result  
goes on year by year  
The purchase after  
a year is discarded  
he gets very little  
mileage, probably  
has to buy another  
battery within the year  
usually gives up  
his vehicle in  
disgust, the info

Regarding the cost of the two batteries. They cannot be compared. The Lead battery is a running expense, whereas the Edison is an investment like the carriage. The Edison battery will outlast several Lead batteries, and do the stated mileage for many years; whereas, no dependence whatever can be put on a Lead battery when used in a vehicle.

So uncertain are they that Tiffany & Co. with 20 vehicles threw them out, and now Hearst & Co. the large department store in New York City, after using them in 20 vehicles for several years, have thrown them all out. In every direction they are being discarded for Edison batteries because they could not be depended upon and disorganized their business, not-with-standing that they had experts.

+ the frequent private managers  
If people manage their business better than  
New York Department stores, and this fact confirms all

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JUNE 22, 1910. SEE LETTERBOOK, LB-083, PAGES 216-220.]

W.C.A.

- 5 -

that I say.

I make it a rule not to attack competitors,  
but this case is so outrageous that I really cannot  
help it.

Yours very truly,

To W. C. Andersen, Esq., Pres.,  
Anderson Carriage Company,  
Detroit, Michigan.

Box  
TAE

June 22 - 1910

Anderson Storage Co  
Detroit Mich

The copy of a letter which  
you say was sent out by the  
Managers of the Atlanta  
Office of a Lead battery  
Co. Received ~~what is it~~

I wish to say that this is  
a first class sample of the  
length that the managers of  
modern methods of business  
will go to in disparaging a  
competitor. For mendacity  
+ untruthfulness this letter may  
be considered the limit -

~~Anderson Storage Co~~  
~~7~~ ~~Anderson Storage Co~~  
~~Anderson Storage Co~~

2

I wish for your benefit analyze  
their statement to show you  
how dishonest it is, and what a  
silly attempt it is to think they  
can buy longer ~~to~~ make  
dishonorable statements to the  
public without being  
found out;

~~Under this name I will take~~  
~~Anderson Storage Co~~  
~~find false statement, the~~

3

Anderson Brougham -

Weight Chassis - 1585 lbs

Weight with Battery 4046 2400, lbs

This battery will drive this vehicle 132 miles on a fair macadam with some hills + low grades when the battery is fully charged - + 110 miles over the same road when rated capacity taken out,

Now take out the Edison + put in the lead battery of the same weight so the chassis shall not be overloaded -

This will be 24 Cells of MV 11 plates This battery gives 6720 watts which at 46 watts per carriage mile just gives 40 miles instead of 112 at my rating + 132 full capacity

4

Now what do these people do to make a showing. They put in 40 cells of the battery in their figures knowing that the motor is only made for 24 lead cells + such a battery could not be used at all - This of itself shows the straits they are under to make a showing +

(Even if they could put it in + changed the motor so Carriage could be controlled they then run up against the weight, They understate their weight by leaving out their heavy trays but ~~do not~~ leave them in the Edison + ~~cannot~~ make

5 ~~45~~

another false statement  
as to the number of  
Edison cells by  
making it 43 whereas  
only 40 are used.

Now about the weight  
Edison weight <sup>with trays</sup> 814 lbs -  
40 MWII with trays 1490 lbs -

Now if the Anderson Carriage  
is right for 40 A6 Edison Cells  
but putting in 40 lead cells  
there would be 676 lbs  
overload, This is like  
adding 4 extra persons in  
addition to the 2 or 3 persons

6

~~the~~ ~~the~~

This shows the limit of

conductivity -

Regarding the other statements  
about economy

In the impossible case they  
cite both Batteries have  
the same capacity ~~and~~  
~~there is a charge for~~

Now what becomes of the  
alleged economy when  
22 percent of the total  
charge in their battery  
is used up in pulling  
the 675 lbs extra weight  
around ~~the~~

7

They have no such efficiency  
as they state their coverage efficiency  
~~is much lower than~~  
is about the same over the whole  
~~life~~<sup>life of the Edison</sup> as the Edison gives over  
several times the period of  
the life of the Lead Battery.

A Lead Battery <sup>merely</sup> commences  
to deteriorate the moment  
you buy it. They inadvertently  
make this statement themselves  
witness instructions appended  
hereto.

8 8

Regarding the cost, of the  
two batteries they cannot  
be compared, ~~The Edison~~  
~~life of a lead battery~~  
~~is not a thing of~~  
the lead battery is a  
running expense whereas the  
Edison is an investment  
like the carriage. The Edison  
battery will outlast several  
lead batteries, & do the  
stated mileage for many  
years whereas no dependence  
whatever can be put on  
a lead battery when  
used in a vehicle.  
Is uncertain are they  
that ~~that~~ ~~stop~~

9

Tiffany & Co throw them out  
 & now Harnes & Co the large  
 dept stores in NY after  
~~have~~ using them in  
 have 20 vehicles <sup>for private use now</sup> have  
 thrown them all out in <sup>the</sup>  
<sup>direction they are being discarded for</sup>  
 & put in Edison batteries  
 because they couldn't  
 be depended upon &  
 disorganized their whole  
 business. Individually  
 that had experts -  
 No people manage their  
 business better than NY  
 dept stores, & this  
 fact confirms all  
 that I say. I make  
 it a rule not to

40

attack competition  
 but this case is so  
 outrageous that I  
 really can't help it

## Condensed Instruction for the Operation of Exide and Hycap- Exide Batteries

### PART II

THESE (4) successive hydrometer readings on each of these cells should likewise show no change. If they increase, showing a rise in the gravity, the charge should be continued until there is no further rise for two (2) successive readings.

Note, however, that the charge must be temporarily stopped if the temperature of the battery gets above 110°, and must not be started again until it has dropped to 100° or lower.

Keep the level of the fluid in the cells one-half (½) inch above the top of the plates. When it falls below this point, add pure water, never acid.

Do not charge the battery if, from experience with the vehicle, it is known that the next trip can be made without charging.

On the other hand, never allow the battery to stand entirely or almost entirely discharged. When in this condition, it must be charged immediately.

If a battery is not to be used for several days, it should be fully charged before standing. If it continues idle for some time, a small charge should be given every two weeks, using the low rate given on name plate. Stop this charge when the cells give off gas freely.

As a battery is used, a deposit (sediment) collects in the bottom of the jars, due to the gradual wear on

the plates. Great care should be exercised that the sediment does not touch the bottom of the plates, thereby short-circuiting them and materially shortening the life of the battery. Before this occurs, the cells should be cut apart and the sediment removed. It is impossible to state definitely at what intervals the sediment should be removed, as this depends on the work the battery does and the care it receives.

To determine when to remove the sediment, it is desirable, after the battery has been charged fifty times, to cut out for inspection one cell from the center of the battery. Then, from the height of the sediment, estimate when it should be cleaned out, making the estimate safe by a sufficient margin to insure cleaning before the sediment can possibly reach the plates. The sediment should be removed when it has accumulated to one-quarter (¼) inch below the bottom of the plates. As an example, suppose the jars have ribs in the bottom one and three-quarters (1¾) inches high, the sediment should be cleaned out when it becomes one and one-half (1½) inches deep; so, if, after having been charged fifty times, there is found one-half (½) inch of sediment, then, at the same rate of deposit, cleaning should be done after the battery has received 100 additional charges, or a total of 150; but on account of the

more rapid rate of deposit with age, it is necessary to make an allowance, say 20 per cent, which would mean cleaning after a total of 120 charges. If, after fifty charges, three-quarters (¾) inch of sediment be found, then the battery should be cleaned after a total of 100, less 20 per cent, or eighty charges, (thirty in addition to the original fifty).

On application, the Company will advise you where the above inspection can be most conveniently made, and the battery cleaned when necessary, which can be determined only by an inspection, or, if one of our own inspectors should be in your vicinity at the time, we will arrange to have him call upon you, inspect your battery, give you a report on its condition and give you general information as to its care and operation. For this service we make no charge.

## The Edison Monthly



C. G. Richards, Owner

Franklin Reagin, Architect

The New Franklin Station Building, corner of Hudson and Franklin Streets. This building will use Edison Service for 2,000 incandescent lamps and 800 horsepower of motors.

In case, for any reason, it should ever become necessary to take a cell of the battery apart, the following points should be carefully noted in reassembling it:

The negative group (gray plates) contains one more plate than the positive group (brown plates).

Each positive plate is separated

## [ATTACHMENT]

### The Edison Monthly

8



General Vehicle Company's Truck Used by a Large Manufacturing Company

from the adjoining negative plates by a perforated rubber sheet and a wood separator grooved on one side. The rubber sheets must always be placed next the positive plates and the wood separators next the negative plates with the plain side next the negative plate.

Throughout the battery, the positive group of each cell is connected to the negative group of the adjoining cell, thus leaving a free positive terminal at one end and a free nega-

tive terminal at the other end of each tray, and of the complete battery. In connecting a cell into the battery, this point must be carefully observed.

#### Increasing Use of Electric Autos

**E**VEN to the casual observer, the great number of electric commercial vehicles on the streets at the present time must be a convincing fact that they are the wagons of the future. From a comparatively



Electric Truck with Trailer for Use in Moving Scenery



THE  
**Anderson Carriage Co.**

MAKERS OF  
*THE*  
**Detroit**  
*ELECTRIC*

OUR ELECTRICS WILL RUN FARTHER ON  
ONE CHARGE THAN ANY OTHER IN THE WORLD



Detroit, Mich.

July 20, 1910

A. J. Dyer, Esq.,

Edison Storage Battery Co.,

Orange, N.J.

Dear Mr. Dyer;

I have your favor in regard to Grinnell Bros.  
and beg to say, we were not grouping in the dark in  
making this complaint to you without knowing exactly where  
we stood. It was not only my friend but Mr. Bacon had a simi-  
lar experience. It is an absolute fact that the Grinnells  
are not in harmony with your instrument. To give you the name  
of this particular party would in no way benefit the situation.  
Take it from me that it is true. I would not mislead you if I  
could on this proposition.

Yours truly, THE ANDERSON CARRIAGE CO.

W.C.A.

By

*H. B. Anderson*  
President

[FROM FRANK L. DYER]

Battery, St.

775

July 22, 1910.

Mr. W. C. Anderson,  
Anderson Carriage Co.,  
Detroit, Mich.

Dear Sir:

Replying to yours of the 20th inst., regarding the attitude Grinnell Bros., are showing toward the sale of our machines, please accept my thanks for the very great interest you are showing in this matter, which interest should certainly result in benefit to our business.

I can well understand that divulging the names of your friends might result in some annoyance to them, and I believe we can handle the situation with the facts you have given us without going into details.

Thanking you very much for the information provided, I remain

Yours very truly,

President.

C:CH

Auto and

Aug 7/10

JUL 23 1910

2

My Dear Mr Anderson

Detroit Mich

I am having one of our Engineers looking up the matter of charging sets both rechargers of Mercury - Aluminum & Motor Generator & also Gasoline Engine running a dynamo,

The latter is some cases desirable as it would be rather attractive to some people especially in Country homes as with it they could light their house Run fans & charge auto & if they had gas car charge the storage battery =  
The best gasoline Engine

would be those used on Motor cycles as they are small & cheap -

I send you his report &

I will continue the investigation to see what can be done

All the preliminary tests have now been run & one Regular test The Advertising people have it & Advt will appear next week in N York papers They are also publishing tests in news items -

Home made  
Copy of DMB  
Faintly visible  
to the right

Scan

Verdugo



THE  
**Anderson Carriage Co.**

MAKERS OF  
**THE  
Detroit  
ELECTRIC**

OUR ELECTRICS WILL RUN FARTHER ON  
ONE CHARGE THAN ANY OTHER IN THE WORLD



*Mr. E*

Thomas A. Edison, Esq.,  
Edison Storage Battery Co.,  
Orange, New Jersey.

My dear Mr. Edison,

Evidently you have not quite understood my proposition. The apparatus that you sent me specifications on is not what there is a large demand on. What is wanted is simply a rectifier to handle alternating current on a basis that we are not compelled to ask \$200 and \$250 for such an apparatus.

If there is anyway that you could put some one on the job and produce a rectifier at a nominal price, it would double our sales not only in large cities but in small cities. They all have electric current and they can buy it at a satisfactory price, but after they buy a car and are asked to put up an enormous price for an apparatus of this kind, it stops the sale of many a car.

I take it you are too busy on other matters to give this your attention at this time. Hope you are not working yourself too hard and that the New York deal is now going to materialize so as to give us all some benefits.

I await with much interest the papers to be forwarded. If we knew what papers had the advertisements in of course we would be glad to subscribe. I wrote Billy Bee on that subject and take it he is taking care of it and that we will have the papers sent us.

Detroit, Mich. July 26, 1910.

*Anderson I am working on a  
satisfying apparatus don't know  
how cheap it can be built for*

*will send you  
names of papers Tuesday  
it is gone in Monday*

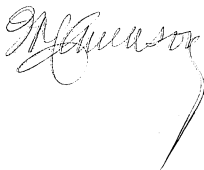
THE ANDERSON CARRIAGE CO.

--2--

Awaiting a reply, we are,

Yours very truly,

W.C.A.

A handwritten signature in cursive script, appearing to read "W.C. Anderson", with a long, sweeping flourish extending downwards and to the right.



ALBERT WEATHERSV,  
MANAGER.

THE  
**Anderson Carriage Co.**  
MAKERS OF  
*THE*  
**Detroit**  
*ELECTRIC*

OUR ELECTRICS WILL RUN FARTHER ON  
ONE CHARGE THAN ANY OTHER IN THE WORLD

DIRECT FACTORY BRANCH

2236 BROADWAY  
COR. 80TH ST.



LARGEST PLANT OF ITS KIND  
CAPITAL STOCK \$1,000,000.  
TEL. 9320 SCHUYLER.

**New York City** October 6, 1910.

Mr. John B. Anderson, Jr.,  
Private Laboratory,  
of Edison Storage Battery Co.,  
Orange, N. J.

Dear Sir:-

Mr. F. P. Flagg, Vice President of the American Express Company, 65 Broadway, N. Y. C., would like some detailed information about the Mt. Washington trip. He called me up on the phone, but I was unable to give him enough information to be of any value. They are watching the Edison Battery, and may be large users of it. Please play this up in the very best way, and give the "DETROIT ELECTRIC" a boost.

Mr. Louis A. Voorhees, of 111 Carroll Place, New Brunswick, N. J. has written us asking for details of the Atlantic City, Philadelphia, Port Jervis run that was made with a "DETROIT ELECTRIC" and Edison Storage Battery, also information of the run over the Ideal Tour.

If you will write these parties, it will be greatly appreciated.

Very truly yours,

THE ANDERSON CARRIAGE CO.

*Albert Weathersby*  
Manager.

AW/LW.



THE  
**Anderson Carriage Co.**  
 MAKERS OF  
**THE Detroit**  
 ELECTRIC



OUR ELECTRICS WILL RUN FARTHER ON  
 ONE CHARGE THAN ANY OTHER IN THE WORLD

And 10/25  
 Thomas A. Edison, Esq.,  
 The Edison Storage Battery Co.,  
 Orange, N. J.

Detroit, Mich. Oct. 21, 1892

*Send me copy of  
 letter to address &  
 please reply  
 about the Waverley  
 & well see if I  
 can get rid of it  
 I will send you  
 a statement  
 and for*

My dear Mr. Edison,

When I was last with you, you will recall that I left with you a letter and copy of Mr. Weatherby's letter, which was simply somewhat of a model that I wished you to write, and you laid it on your desk and said you would write him a letter that would be pleasing and answer the purpose. Therefore, if you have not done so, the sooner you can drop this into Mr. Weatherby's hands the better. This man Harris is certainly working his head off, and has in view several sales. Therefore, just the simplest little letter as coming from you, will simply urge him to work his head off, as the saying is.

WAVERLEY.

You also suggested that you would write me a letter to the effect that you were not a user of a Waverley electric, or something that we could use to counteract the advertisement that he is handing out to the people. Every periodical in the country has a long story about what you said of the controller and that you are a user of two of his cars, etc.

I should think a letter simply stating that a number of years ago you purchased such a car and you have added to and improved it, etc., would answer. We do not want anything very severe; we simply would like something to counteract this in some small degree if possible.

Of course if you do not think it possible to do it, we shall acquiesce in your thoughts.

Hoping that this will find you well, and that your developments are coming your way, we are,

Yours very truly,

THE ANDERSON CARRIAGE CO.  
*W. C. A.*  
 President

W. C. A.



THE  
**Anderson Carriage Co.**

MAKERS OF THE  
"DETROIT ELECTRIC"

OUR ELECTRICS WILL RUN FURTHER ON  
ONE CHARGE THAN ANY OTHER IN THE WORLD.



*Ans 10/25/10*  
Mr. Thomas A. Edison,  
c/o Edison Storage Battery Co.,  
Orange, N. J.

My dear Mr. Edison:-

*Says - That we will have final  
model done Saturday 4th  
after week running it out  
will make through 100 sets*

Subject: Your new Rectifier.

You will pardon us for hurrying you on this proposition, but it is really a serious one as we see it. To illustrate: We have under construction a third station in this city in the alternating current district. The garage has a capacity of 40 cars. To equip this new with the present apparatus, the investment totals not less than \$3500.00, and it not only applies to this garage but to several others that are now being built in other cities under our supervision and advisement.

It is our plan first in making an agency, to get them interested in an exclusive electric garage, and what stops many from going into the proposition is this nasty investment for the equipment changing the alternating current. Now, if your rheostats are going to come forward and are a success, it would make an entire change in this proposition, and it would be the most helpful thing that we can imagine for the electric car, and would aid us in getting more agents to handle our car, as the investment would cut down considerably more than one-half. This would aid us in getting a little more interest in the electric car.

Now, I appreciate that it is hurrying matters to urge you for a definite statement on this matter, but I want you to write me by return mail advice in the matter. Shall we go on and buy this expensive equipment, or can we afford to wait, and in waiting is it a sure thing that you will have the equipment for us? That is the point, you will note, we want settled if possible.

W. C. A.

Yours very truly, *W. C. Anderson*

A REGULAR STOCK CAR MODEL "A" "DETROIT ELECTRIC," RAN FROM DETROIT TO ATLANTIC CITY (1000 MILES) WITHOUT A BROKEN PART AND ENTIRELY ON ITS OWN POWER. AVERAGE DISTANCE ON A SINGLE CHARGE 64 MILES. THE ROADS WERE VERY MUDDY DUE TO RAIN, AND THE CAR CARRIED TWO PERSONS AND THEIR BAGGAGE. THIS IS THE WORLD'S BEST RECORD.

Anders - Andersen  
Resident - Amer.

10/31/10

Friend Anderson -

Dear Sir

I see you are a little worried about  
towns like Seattle where there are so  
many hills - Did it ever occur to an  
automobile builder that the motor  
should fit the battery and that hilly  
towns & flat towns should be treated  
a little different. Of course I could  
make and will in time make a  
battery to fit a flat town motor  
so it can be worked in a hill town  
but the easiest way is to change  
the motor. The present battery will  
supply any amount of juice  
so it would go up any hill in Seattle  
~~in a flash~~ but the motor does not  
fit the characteristics of the battery  
better take this up with your  
motor man. Edison

Form 1

# THE WESTERN UNION TELEGRAPH COMPANY

INCORPORATED

25,000 OFFICES IN AMERICA.

CABLE SERVICE TO ALL THE WORLD

This Company TRANSMITS and DELIVERS messages only on condition limiting its liability, which have been accepted to by the sender of the following message. Where our telex is sent to a station only by means of a message back to the sending station for correction, and the Company will not hold itself liable for errors or delays in transmission or delivery of Unrepeated Messages, beyond the amount of time paid thereon, nor in any case beyond the limit of Fifty Dollars, at which, unless otherwise stated below, the message has been valued by the sender thereof, nor in any case where the claim is not presented in writing within sixty days after the message is filed with the Company for transmission. This is an UNREPEATED MESSAGE, and is delivered by means of the sender, under the conditions stated above.

ROBERT C. CLOWRY, PRESIDENT

BELVIDERE BROOKS, GENERAL MANAGER

NUMBER	SENT BY	REC'D BY	CHECK
31	W.D. 59		4088

RECEIVED AT

220 Main St., Orange, N. J.

DATED

NOV 3 - 1910

To

*Shes a Edison Laboratory*  
*You have order for nearly*  
*one hundred Batteries Cars Sold*  
*with your Batteries & Shipments*  
*Completed Boxes are forced to*  
*Deliver Case with Leads, Cancellations*

Form 1

# THE WESTERN UNION TELEGRAPH COMPANY

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ROBERT C. CLOWRY, PRESIDENT

BELVIDERE BROOKS, GENERAL MANAGER

NUMBER	SENT BY	REC'D BY	CHECK

RECEIVED AT

220 Main St., Orange, N. J.  
Telephone 90, Always Open

DATED

191

To

*will follow unless Carload is*  
*sent by express you promised*  
*to care for us and*  
*Carry fifty sets here, what*  
*we want is batteries not*

**THE WESTERN UNION TELEGRAPH COMPANY**

**25,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.**

**TRANSMISSIONS TO ALL THE WORLD**

This Company TRANSMITS and DELIVERS messages only on conditions limiting its liability, which have been accepted by the sender of the following message.

Messages may be garbled against, only by repeating a message back to the sending station for comparison, and the Company will not be held liable for errors or delays in transmission or delivery of Unrepeated Messages, beyond the amount of tolls paid thereon, nor in any case beyond the sum of Fifty Dollars, at which, unless otherwise stated before, this message has been valued by the sender thereof, nor in any case where the claim is not presented in writing within sixty days after the message is filed with the Company for transmission.

This is an UNREPEATED MESSAGE, and is delivered by request of the sender, under the conditions named above.

**ROBERT C. GLOWRY, PRESIDENT**

**BELVIDERE BROOKS, GENERAL MANAGER**

NUMBER	SENT BY	REC'D BY	CHECK
		238 Main St., Orange, N.J. Telephone 90, Always Open.	5

RECEIVED AT

RECEIVED AT \_\_\_\_\_ Telephone 90, Always Open. \_\_\_\_\_ 191

**DATED.**

To

Promises answer quick if asked  
will be forwarded to him  
Anderson Romo C



THE  
**Anderson Carriage Co.**  
MAKERS OF *THE Detroit* *craft*  
**Electric**

OUR ELECTRICS WILL RUN FARTHER ON  
ONE CHARGE THAN ANY OTHER IN THE WORLD



Mr. W. G. Bee, Manager of Sales,  
The Edison Storage Battery Co.,  
Orange, N.J.

*Nov. 25, 1910*  
Detroit, Mich.

*Battery*  
*Ad.*

Dear Sir:-

Answering your letter of the 23rd, enclosing us the copy of the advertisement which you intend to run in the Chicago, Denver and Kansas City daily papers, would say that we heartily appreciate the benefit that this ad would be to the Edison Storage Battery cause.

There are only a few suggestions that we would make in the wording of the ad; for instance: in the first paragraph where you use the word "cheap" lead battery. We believe the ad would be stronger if you left the word "cheap" out of it, as then it would not be referring to anything but a lead battery, and that is exactly what you are driving at, whether it is cheap or expensive. The lead battery people might very reasonably say that they did not make a cheap lead battery, but made the best there was, and for this reason your advertisement had no bearing on their product.

The expression "half the mileage" might be changed to read "a great deal less mileage", because we often sell an Edison Battery to people who do not get twice the mileage that they have known lead batteries to furnish.

There are other features that you could put in the ad which could be of a positive nature, rather than state the exact comparison between what an Edison Battery will give on a mileage basis and a lead battery.

In the next paragraph you might make it read stronger by substituting the word "first" cost instead of "total" cost, and inserting the word "first" before the word cost, making it read about: "is first cost the only thing?" etc.

Mr. W. G. Bee,

The strongest feature of the Edison Battery is the saving of the up-keep of the car from the battery standpoint.

In the paragraph where you refer to the seven years that Mr. Edison has been working on the battery, it might be well to write this to show that these seven years were spent on a battery that did not have lead as part of its composition. It is only by inference in the closing remarks of that paragraph that a person who does not know what an Edison Battery is made of, would catch the idea that it did not have any lead in it.

The writer's experience is that there is a great amount of ignorance among the public to-day as to what is in an Edison Battery, and for that reason, if this advertisement were illustrated with some of the plates of an Edison Battery with the expression to the effect that no lead to deteriorate or sulphate were used in its construction, it would possibly show the situation up stronger.

Yours very truly,

C-EP

THE ANDERSON CARRIAGE CO.

By

*Wilson Citzer*

PM - 22 - 100000

W.C. Smith 12/14/10  
Anderson

Night letter

Have just been looking at  
your vehicle and do not wonder  
you have trouble with cold  
weather, battery not protected  
from cold wind ~~subzero other~~  
~~at all~~ - We have been  
explaining for two years that  
battery boxes should be  
wind tight, Laundon vehicles  
all tight and are doing their  
regular mileage, so will  
yours if you do this simple  
thing. I am going to take  
one or two of your complaining  
customers for the boxes &  
prove it,  
Edison

Dec 15th 1910

Sent 11:10 AM

Anderson - Co. Anderson Carriage Co.  
Detroit, Mich.

Yesterday  
~~Last night~~ closed battery  
Compartment, put <sup>vehicle</sup> out in yard  
all night, temperature freezing  
point, this morning average  
temperature had fallen from  
down to ~~80~~ 80 degrees  
lowest temperature was ~~50~~  
outside and bell 70 degrees  
had ~~been~~ vehicle been  
running there would <sup>have</sup> been  
no fall of temperature

2  
and ~~your~~ Capacity will be  
just the same way below  
Zero as in summer  
What you need to  
satisfy your customers  
is a Carpenter - evidently  
there has been an entire  
misunderstanding as to  
our repeated statements  
about closed battery  
Compartments

Edison

Form No. 288.

**NIGHT MESSAGE.**  
**THE WESTERN UNION TELEGRAPH COMPANY.**

INCORPORATED—  
23,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.

*Copy*  
This Company TRANSMITS and DELIVERS messages only on conditions limiting its liability, which have been accepted in by the sender of the following message.  
Errors can be avoided only by repeating a message back to the sending station for comparison, and the Company will not hold itself liable for errors or delays  
in transmission or delivery of any message. Night Messages sent at reduced rates, beyond a sum equal to ten times the amount paid for transmission; nor in case  
and when the claim is not presented in writing within thirty days after the message is filed with the Company for transmission.  
This is an UNREPEATED NIGHT MESSAGE, and is subject to the conditions stated above.

ROBERT C. CLOWRY, President and General Manager.

RECEIVED at

DEC 30 1911

Form No. 288.

**NIGHT MESSAGE.**  
**THE WESTERN UNION TELEGRAPH COMPANY.**

INCORPORATED—  
23,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.

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and when the claim is not presented in writing within thirty days after the message is filed with the Company for transmission.  
This is an UNREPEATED NIGHT MESSAGE, and is subject to the conditions stated above.

ROBERT C. CLOWRY, President and General Manager.

RECEIVED at

*W. C. Clowry*  
and two years are you going to live  
11-70

#### **1910. Automobile - Lansden Company (D-10-03)**

This folder contains correspondence and other documents relating to the business of the Lansden Co., a manufacturer of electric wagons in which Edison possessed a controlling interest. Included is an audit report prepared by the accounting firm of Lybrand, Ross Bros. & Montgomery. Also included are memoranda and financial statements and a summary of orders completed and received. In addition there are numerous documents pertaining to the promotion of Lansden vehicles. At the end of the folder is an undated draft in Edison's hand of a promotional article regarding the use of the Edison storage battery in Lansden wagons. Among the correspondents are Frank L. Dyer, president of the National Phonograph Co. and vice president of the Edison Storage Battery Co.; Leonard C. McChesney, head of the Advertising Department; and John M. Lansden, Jr., and other officials of the Lansden Co.

Approximately 70 percent of the documents have been selected. The items not selected consist of memoranda, letters of transmittal, and financial statements that duplicate information in selected material.

Please  
return to  
Mushkin  
when through

Dyer

This don't look good  
without we can establish  
agreements & increase  
sales & do it  
soon - there is going to  
be a large loss  
this needs attention

Edison

[ATTACHMENT]

Telephone 840 Branch Brook

The Lansden Company  
Electric Wagons

54 & 56 Lackawanna Avenue

Newark, N. J. January 10, 1910.

VARIOUS TYPES FOR COMMERCIAL  
AND PASSENGER SERVICE. THE  
EDISON STORAGE BATTERY EQUIPMENT

RECORD OF ORDERS RECEIVED, BILLS RECEIVED, AMOUNTS BILLED & BANK BALANCE.

ORDERS RECEIVED:-	None
BILLS RECEIVED:-	\$1935.39
AMOUNTS BILLED:-	\$3663.00
BANK BALANCE:-	\$2422.10

*Don't forget to  
work up the agency  
business - the Federal  
Vehicle Co are  
getting 6 to 8  
per day for us  
scarcely anything  
We have a fine  
Record. There is  
Very bad  
Edison*

[ATTACHMENT]

THE LANSDEN COMPANY, NEWARK, N. J.

Financial Statement at Close of Month Ending

December 31st 1909.

18

ASSETS

Cash	1899.45
Accounts Receivable	22838.90
Notes Receivable	
Plant	19877.15
Company's Machines	5850.00
Materials and Supplies	24170.20
Orders in Process	20388.26
Complete Machines	16033.64
Reserve on unexpired Insurance	382.39
Post paid in advance at 190 Div. St.	8.00
Undistributed Taxes	41.53
Frank L. Dyer, Treasurer.	30000.00

Total

112175.52

LIABILITIES

Accounts Payable	22825.77
Notes Payable	89400.00
Accrued Expense	858.60
Capital Stock	30000.00

Total

143084.37

SUMMARY

Assets	112175.52
Liabilities	143084.37

Net Profit or Loss

30908.85

[ATTACHMENT]

Unfilled Orders and Contracts

Adams Express Company, New York, N.Y.	One Type 86 Adams Wagon less battery	1863.00
Ohio Elevator Company, Goukera, N.Y.	One Type 366 Alfalfa Truck	2200.00
Col. L. C. H. H. Co., Orange, N.Y.	One Lumbercub	3450.00
D. L. and W. R. Co., Rochester, N.Y.	One Type 366 Puggery Truck	1800.00
The Kelle Brothers Company, Cleveland, Ohio	Five Type 76 E. Paul Wagon	12152.50
The John E. Mayers Company, Albany, N.Y.	One Type 176 E. Paul Wagon	2950.00
T. Shon, (N.Y. and Springfield Depot), Springfield, Mass.	One Type 36 Adams Wagon	2450.00
Kronberg-American Lines, Rochester, N.Y.	Two Type 607 G. Dist. Trucks	4950.00
The Hughes Company, Cleveland, Ohio	Three Type 76 E. Paul Wagon	7650.00
Steinway and Sons, New York, N.Y.	One Type 76 Adams Truck	33200.00
Total		42115.50

[ATTACHMENT]

SUMMARY OF VARIOUS ITEMS AS SHOWN ON THE FINANCIAL AND OPERATING  
STATEMENT FOR MONTH ENDING DECEMBER 31st, 1909.

-----  
C O M P A N Y ' S   M A C H I N E S

One Electrette	1850.00	
One Delivery Wagon	1000.00	2850.00

C O M P L E T E   M A C H I N E S

One Electrette 3 Complete	1459.42	
One 4-wheeled Baggage Truck	1124.56	
One Taxicab	2766.77	
One Panel Wagon (Show)	1480.00	
One Type 46 Express Wagon (Show) incomplete	1000.00	
One Standard Express Wagon Body	450.00	
Three Type 36-A Exp. Wagon Bodies @ \$147.88	443.64	
Two Type 36-H Side Rack Bodies @ \$192.84	385.68	
One Type 46-G Body	155.14	
Two Type 46-A Express Bodies @ \$187.83-	375.65	
One Taxicab Body	582.00	
One Type 36 Chassis (Grey Wagon)	788.68	
One E. V. Express Wagon	300.00	
One Type 36 Platform Body for testing (grey)	121.00	
One E. V. Chassis from Macy	200.00	
One Type    -3 wheeled Truck	1106.21	
One Type 86-A Ad. Express Wagon	1824.89	
One Type 167-E Wagon No. 364 (Wagner)	1470.00	16033.64

P L A N T

Machinery	3198.74	
Instruments and Tools	2778.27	
Furniture and Fixtures	3151.91	
Patterns, Templates and Dies	2219.97	
Drawings and Designs	8528.26	19877.15

A C C R U E D   E X P E N S E

Wages due Pay Roll	812.00	
Wages due Night Watchman	12.00	
Wages due Sotre Keeper	34.80	858.80

[ATTACHMENT]

ORDERS IN PROCESS FOR MONTH ENDING DECEMBER 31, 1909.

2108	1766.63
2357	1575.12
2530	1249.46
2534	260.71
2542	1077.21
2546	85.00
2597	3123.71
2601	714.32
2602	2124.24
2755	108.13
2756	6.21
2813	46.16
2814	5.47
2821	8.32
2833	45.68
2834	39.52
2837	20.40
2852	29.64
2854	17.20
2861	1087.90
2862	462.78
2866	7.62
2869	.15
2870	.15
2871	5.51
2877	29.11
2880	18.59
2888	.68
2889	1306.56
2890	230.26
2891	15.00
2892	99.40
2895	30.39
2906	725.29
2907	368.03
2908	585.66
2909	1759.72
2910	891.24
2911	17.02
2919	6.41
2922	29.64
2923	1.69
2925	13.50
2926	35.65
2927	24.63
2932	12.20
2935	10.91
2936	<u>205.50</u>

\$20388.26

[ATTACHMENT]

SUMMARY OF ACCOUNTS PAYABLE AS OF DECEMBER 31st, 1909.

Am. Wood Working Mach. Co.	\$ 2.25
A. & J. H. Anderson Mfg. Co.	95.00
Lathrop Anderson	92.15
Amburg File & Index Co.	6.10
Am. Roller Bearing 5th Wheel Co.	20.50
Ashville Bataille & Co.	75.00
Bailley & Ailing	6.75
Bainster & Pollard Co.	7.86
The Barlow Foundry Co.	200.18
Baldwin Grain & Mfg. Co.	422.50
Bockwith-Chandler Co.	12.00
J. C. Beitt	7.50
A. Hall Boney	41.85
Bettes & Ebsen	22.50
Briscoe Mfg. Co.	17.40
The Billings & Spencer Co.	25.00
Brown Lipe Gear Co.	211.10
Jno. Boyle & Co., Inc.	24.96
Edward V. Brokaw & Bro.	4.20
Wm. H. Buell Co.	31.20
Carolina Pine Products Co.	30.31
Gray Spring Works.	22.30
Cartier Wal to Load Co.	33.75
The Cincinnati Ball Crank Co.	4.22
The W. T. Crane Carriage Hwco. Co.	126.29
Centaur Motor Co.	92.00
Jas. A. Cox & Co.	39.62
Continental Fibre Co.	11.18
A. C. Counter & Co.	6.98
C. Cowles & Co.	156.24
Peter Cooper's Glue Factory	15.00
The Crosby Co.	10.80
De Forge Rolling Co.	20.85
De Vauxmay Bros.	30.50
R. P. Dietz Co.	24.00
Gustav A. Dingeler	24.00
Diamond Rubber Co.	210.90
Driver-Harris Wire Co.	19.80
Thomas A. Edison	2.38
Edison Phonograph Works	.05
The Electro Dynamic Co.	326.46
The Electric Storage Battery Co.	105.65
Jos. F. Eberhard & Son Inc.	11.45
Edison Storage Battery Co.	1118.73
William H. Edwards	62.50
Elco. Maintenance & Repair Co.	67.00
Empire Auto Supply Co.	3.10
The English & Herwick Co.	49.82
The English & Herwick Lamp & Fdry. Co.	6.00
Estate of William Hawkins	75.00
The Fairbanks Co.	18.50
Falouts Iron & Steel Co.	203.59
Peter A. Farnes & Co.	36.15
Firestone Tire & Rubber Co.	425.32
General Electric Co.	1801.59
The P.H. Gill & Sons Forge & Mach. Works.	320.00
G. A. Goldsmith.	100.81
The Goodyear Tire & Rubber Co.	208.00
Groeb-Ho Goven Co.	12.00
Gorton & Lingerwood Co.	9.61
Hardinge Brothers.	47.00
Edmund F. Heata & Son	125.05
George A Hobb.	9.60
George Healy	160.00
Heller Brothers Co.	18.33
The Hornelless Ago.	2.00
The F. W. Hortsmann Co.	19.50
T. P. Howell & Co.	15.08
U. T. Hungerford Brass & Copper Co.	35.52
Hyatt Roller Bearing Co.	172.90
	\$ 17848.75

[ATTACHMENT]

SUBIARY OF ACCOUNTS PAYABLE AS OF DECEMBER 31st, 1909.

Brt Pwd. - - - - 17848.75

J. J. Hockenjos Co.	\$ 107.32
Henry P. Howard	28.40
International Time Recording Co.	1.00
H. A. Jaeger	30.00
Philias Jones & Co.	34.20
Um. A. Jones & Son	457.58
Keuffel & Esser Co.	3.96
E. B. Leonard	3.95
The Light Mfg. & Fdry. Co.	78.79
The Lockwood Co.	24.80
Ludlow & Squier	32.16
Lybrand, Ross Bros. & Montgomery	101.40
E. R. Merrill Spring Co.	19.38
Massachusetts Chemical Co.	22.50
Meeker Foundry Co.	215.17
Miller Electric Co.	55.40
Murphy Varnish Co.	51.50
The National Lock Washer Co.	10.45
Newark Gear Cutting Machine Co.	4.80
The New Departure Mfg. Co.	21.25
The New York Telephone Co.	25.45
The National Saw Co.	9.05
Newark Desk Co.	40.69
Newark Glass Co.	11.92
New York Transportation Co.	120.45
The Pentasoto Co.	31.25
Chas. R. Partridge	256.50
Patriarche & Bell	5.97
Mathias Plum	20.50
The Post & Lester Co.	5.00
F. S. C. & H. J.	24.22
V. Peterson	9.55
Pratt & Whitney Co.	11.21
The Petlaw Sales Co.	.50
Riveride Steel Casting Co.	624.41
Roe & Conover	130.76
The Roberts Coal Co.	92.50
R. B. Rodriguez	7.80
Seards Mfg. Co.	6.84
D. F. Segelke	26.80
Sier-Bath Co.	169.52
Singer Sewing Machine Co.	37.75
A. S. Snowwood	4.85
Standard Oil Co.	10.89
Thomas A. Sanford Co.	4.55
Strieby & Footo Co.	54.75
Spring Porcel Co.	826.78
The Schwarz Wheel Co.	238.91
The Seoville & Pock Co.	20.00
Corneliusson Mfg	45.50
Thermoid Rubber Company.	1.00
20th Century Auto Touring Co.	1.70
Irving Underhill	12.00
U. S. Mc Adamite Metal Co.	78.75
The Veeder Mfg. Co.	12.25
G. T. Vogelger & Son.	2.50
The Westbury Lamp Co.	61.20
Weston Electric Instrument Co.	28.10
G. A. Willey Co.	333.45
The Whitney Mfg. Co.	9.03
Frank A. Whitten	29.07
Ward Leonard Electric Co.	22825.77

[ATTACHMENT]

SUMMARY OF ACCOUNTS RECEIVABLE AS OF DECEMBER 31st, 1909.

Adams Express Co.	\$ 1930.90
Adams Vehicle Co.	13.50
Aitken Son & Co.	2.65
Central Smelting Works	174.02
Camberlain Auto Co.	4.40
Decker Electrical Mfg. Co.	5.20
Thomas A. Edison	253.61
Edison Phonograph Works	123.66
Fairfield Dairy Co.	4479.90
James P. Feeney	49.99
James A. Hearn & Son.	101.89
A. G. Hydo & Sons	2.25
John R. Kinsey	7.61
Lidgerwood Mfg. Co.	6.80
R. H. Macy & Co.	120.53
Jed. J. Mandary	11.40
Metropolitan Opera Co.	2673.10
John Milliken	14.28
F. J. Newcomb Mfg. Co.	27.46
Nation Mfg. Co.	1.40
New York Telephone Co.	10.98
The New York Edison Co.	35.45
New York Hospital	2757.35
Mortimer Morden	54.60
New York Transportation Co.	15.00
Pacific Improvement Co.	152.98
R. H. Pike & Bro.	34.08
N. Y. & Springfield Desp (T. SHRA)	2520.39
J. L. Street	57.83
Springfield Waste Co.	3.50
Oscar Tamm	65.42
20th Century Auto Touring Co.	20.00
J. W. Trumbidge (Hotel St. George)	4.35
U. S. Express Co.	35.75
W. P. & Co. Express	6900.00
Wychoff-Church & Partridge	206.50
George Emret	1.20
United Electric Co. of N. J.	25.00
	\$22858.90

[FROM FRANK L. DYER]

Memorandum of F. L. D. for discussion with Mr. Edison.  
-----

Mr. Hansen of the General Vehicle Company called to see me with W. G. Bee on Friday afternoon, January 21st. He first said that personally he had no objection to the Edison battery but believed that it had already won out, at least in some respects. I said that we knew that representatives of the Electric Vehicle Company had made more or less disparaging remarks regarding the Edison battery and had called attention to the fact that it was practically a new thing, that it had not been sufficiently tried out and that its efficiency and durability were not guaranteed. He replied that if those statements were made they must have been made by their salesmen, and that they had very little control over what the salesman said. He asked me if we wanted the Electric Vehicle Company to use Edison batteries and I said that of course we did. He then said that they would be willing to enlarge their battery boxes so that the vehicles of the Electric Vehicle Company could take the Edison storage battery provided we made some concession to them. I asked him what concession he wanted. He said that the Lanadon <sup>Company</sup> were taking advantage of the publicity and advertising of the Electric Vehicle Company and were selling vehicles at a lower price than the Electric Vehicle Company could afford to sell them for. I asked him if it was his idea that we should raise the price on the vehicles and he said it was, although he did not want us to raise the price so that the vehicle itself without the battery would be the same as theirs. According to his statements, the vehicles of the Electric Vehicle Company are better than the Lanadon and show a superior result in practice. I told him

(2)

that we would not change the price but that we did expect to go into the business more extensively and do some advertising and general publicity and therefore that his objection would be largely taken care of. I said the time would come when they would have to use Edison batteries and that it would be better for them to make provision for them now instead of being forced to make provision for them later. He then asked if we would be willing to sell out the Lansden Company, and I said that possibly later on we might do so, although at the present time we could not do so on account of contracts. I told him I would think over the matter and that later on I might have some proposition to make to him.

1/21/10.

F. L. D.

615

Personal

Orange, N. J., Jan. 31, 1910.

Mr. John H. Lonsden, Jr.,  
The Lonsden Company,  
Hobart, N. J.

Dear Sir:

I beg to confirm the suggestion made last night, at Mr. Edison's request, that in order that the business of the Lonsden Company may be carried on as economically as possible, and a satisfactory showing ultimately made, all experimental work be discontinued and that the work of the company be limited to the production of stock machines. Later on when the company gets in better shape, we may be in a position to take up experimental work.

Regarding the suggestion made by you and Mr. Whitten that the company should take up a limited line of advertising, I will discuss this matter with Mr. Edison as soon as possible and let you know what he decides to do. Personally I think the suggestion is a very good one, and from what he has said to me I believe he will approve of it.

Yours very truly,

FJD/IMW

President.

Dyer -

✓  
Clausen

Clausen was to have  
his Catalogue out  
weeks ago - It's somewhat  
difficult for a Concern  
to do Biz without a  
Catalogue

Did not make them  
out 2/10/10

TAZ

✓  
to Clausen  
Wm

Orange, N. J., Feb. 4, 1911.

Mr. J. H. Landon, Jr.,

54 & 56 Lockwood Ave.,

Howarth, N. J.

Dear Sir:

Before Mr. Edison left he handed me a memorandum requesting me to look up the matter of preparing a catalogue for the Landon Company and which he understood had been under way for some time. Please advise me what has been done with this matter and how soon you think the catalogue can be prepared.

Mr. McChesney will no doubt be able to give you a lot of help in connection with the catalogue.

Yours very truly,

FJD/IWW

President.

VARIOUS TYPES FOR COMMERCIAL  
AND PASSENGER SERVICE. THE  
EDISON STORAGE BATTERY EQUIPMENT

## The Lansden Company

### Electric Wagons

54 & 56 Lackawanna Avenue

Newark, N. J. Feb. 7th, 1910.

Telephone 840 Branch Brook

Mr. F. L. Dyer,

Edison Phonograph Works,

Orange, N. J.

Dear Sir:-

Replying to your favor of the 4th inst., would say,  
that we have been working on the Lansden Co. catalog for some  
time.

We have in hand now practically all the written matter  
required but we are not satisfied with its present form. We  
are engaged in rewriting now and should think this part of the  
work might be completed inside of two weeks.

We have a considerable number of cuts already finished  
and are engaged in getting other photographs made.

It was our intention to have gotten the catalog out  
in January but we held back in order to see what sort of a  
publication the Storage Battery Company was going to issue,  
as we did not wish to duplicate their matter in any way.

You may be sure that this matter is receiving our  
best attention.

Very truly yours,

The Lansden Co.,

Per -

FAW/JO

*Am*

*W. H. White*  
*Jan 10*

Orange, N. J., Feb. 8, 1910.

Mr. F. A. Whitton,  
The Lanston Company,  
Newark, N. J.

Dear Sir:

Yours of the 7th inst. has been received on the subject of the catalogue for the Lanston Company. Please keep right after this and get out the catalogue as soon as possible, because I want to have the matter entirely finished before Mr. Mason returns.

As soon as you get the thing written up you might take it up with Mr. McChesney, whose ideas on these subjects are generally very good. If necessary I can then consider it before it finally goes to press.

Yours very truly,

FLB/IFW

President.

VARIOUS TYPES FOR COMMERCIAL  
AND PASSENGER SERVICE, THE  
EDISON STORAGE BATTERY EQUIPMENT

Telephone 840 Branch Brook

## The Lansden Company

### Electric Wagons

54 & 56 Lackawanna Avenue

Newark, N. J.

Feb. 26th, 1910.

515  
Mr. Frank L. Dyer,

C/o Edison Photo. Wks.,

W. Orange, N. J.

Dear Sir:-

We received advertising estimate from the Wagner & Fields Company some days ago, but have not submitted it, as we learned from Mr. Mc Chesney that he had not yet gotten anything from Calkins & Holden.

Mr. Mc Chesney has today informed us, however, that he has received this proposition and we are therefore writing to inquire if it will be possible for Mr. Lansden and I to have an interview with you on Monday next at such time as may best suit your convenience, in order to lay this matter before you.

Not having been able to reach you by 'phone, we are writing, but hope that you will telephone us as soon as possible as to what time we may see you so that arrangements may be made in order not to conflict with other engagements.

Very truly yours,

The Lansden Co., *R. W. Pitts*

Per -

*Considered  
Always Fair  
Today*  
PAID

Automobile

56

Orange, N. J., Feb. 28, 1910.

Mr. Thomas A. Edison,

Port Myers, Florida.

Dear Mr. Edison:

It seems pretty tough to make any suggestions regarding the Lanston Company by reason of which expenses will be increased, especially in view of the rotten showing this month, when not a single order was obtained. Not only this, but Lanston tells me that they did not receive a single inquiry regarding vehicles nor a single request for printed matter. I am sure that so far as their abilities go they are doing all that they can to get orders, because when I see them they all, from Lanston down, seem to be apprehensive and harassed, and I believe they are really trying their best. The situation, however, is that when orders come they are in relatively large amounts but are very infrequent and they are obtained only after hard fighting and much delay.

Mr. Hanson has resigned from the General Vehicle Co. and I have seen him a number of times, and he has told me some of his own experiences and the difficulties in getting orders. He was talking about the possibility of his taking over the Lanston Company, putting some additional capital into it and trying to develop the proposition, but his idea was to have some sort of an exclusive arrangement for a limited period for the Edison battery.

E. A. Edison.

(2)

2/20/10.

I told him to put his proposition in writing and that I would submit it to you.

Regarding the Edison Company, it seems to me that what we are up against is lack of publicity. The percentage of orders obtained from prospects is very low, and it is obviously necessary that the vehicles should be brought to the attention of many more prospective purchasers. The other vehicle people are advertising quite extensively, and I think we should. By doing some newspaper advertising and emphasizing the fact that the Edison battery is used I believe that we would hear from a very large number of people who may have been putting off using electric vehicles until the Edison battery came and that we would also hear from other people who would be interested because of the battery. Such persons would be in addition to prospects who might be interested in the electric vehicle proposition alone. Assuming that we would take up an advertising campaign involving an expenditure of about \$1,000 per month, I have obtained two propositions, one from Calkins & Holden and one from the Wagner-Field Co., which I send you under separate cover.

Calkins & Holden propose going into the New York Sun for three months, once a week, with advertisements three columns wide by twelve inches deep. With this publicity they would continue for nine months an expensive circularizing campaign, which, of course, could be made very comprehensive at an expense of \$1,000 per month. They evidently figure that by advertising in the New York Sun for three months, circular matter would be probably accepted with interest by business men.

Mr. T. Edison.

(3)

2/28/10.

The Wagner-Field Company propose a more comprehensive plan ~~by~~ going into the New York Times, the New York Sun and the Brooklyn Eagle, with advertisements two columns wide and about three and one-half inches deep, and also in the Commercial Vehicle and the Power Wagon one page each month, and finally three pages per year in the Electrical World, Carriage Dealers Journal and The Carriage Monthly.

It seems to me that the proposition of the Wagner-Field Company is much more sensible and that by carrying it out with good display matter we ought to be able to work up a reasonable amount of publicity. I believe that now is the time to do this, because the public have been hearing for years about the Edison battery, and with all the roading matter that we have been having recently on the battery car I think that there would be many prospective purchasers who would at least be sufficiently interested to make inquiries. If this is not done I believe the development of the Edison Company will be discouragingly slow. Even if you contemplate selling out the Edison Company, this advertising would probably repay itself in the added value to the business.

I wish you would think over these questions and let me have your views.

Yours very truly,

FLD/IGN

Enc-

REFER TO THIS NUMBER  
IN YOUR REPLY

1179

MEMORANDUM

FRANK L. DYER,  
CHANCELLOR & C.

3/3/10.

Mr. Holden:

At the present time the principal office of the Lansden Company is in the Laboratory Building, and Mr. Harry F. Miller is the person named upon whom service shall be made. For business reasons it may be desirable to have the head office changed to Newark and Mr. John M. Lansden designated as the person upon whom service shall be made.

I wish you would prepare the necessary papers to have this change put into effect, and after they are drawn up, I can then consider definitely whether or not to put it through.

FLD/MR

F. L. D. *FLD*

[ATTACHMENT]

|| Directors Meeting  
Lansden Co

72 Feb 11/10

Resolution adopted changing  
Office to Newark, changing  
agents for process from  
H. F. Miller to J. W. Lansden

Resignation of John Miller  
as Treasurer accepted &  
George S. Freeman, appointed  
in his place.

Adjourned

W. H. S. /

REFER TO THIS NUMBER  
IN YOUR REPLY

1330

# MEMORANDUM

FRANK L. DYER,  
CHANCE, N. Y.

515 Mr. McChesney:

3/14/10.

I hand you herewith two memorandums from Mr. Edison on the subject of Lanodon advertising, and I have written him to-day that we have decided to go ahead with the plan proposed by Wagner & Fields, limiting our advertising to newspapers in New York City and Brooklyn and to one or two trade papers, the whole to cost not more than \$1,000. per month. I wish you would go right ahead with the details of the plan in consultation with Mr. Lanodon and Mr. Whitten, keeping me advised as to progress.

FLD/IWW

F. L. D.

Enc-

Auto

36

Orange, N. J., March 14, 1910.

Mr. Thomas A. Edison.

Fort Myers, Florida.

Dear Mr. Edison:

Your two memorandums on the subject of the Lansden Company have been received. I have gone into the matter again with Mr. McChesney and Mr. Lansden, and we believe that we should adopt the proposition submitted by Messrs. Wagner & Fields, spending about \$1,000 per month and limiting the advertising to New York and Brooklyn papers with the addition of one or two trade papers.

Lansden always has on hand one or more wagons for demonstrating, although he says that prospective customers seldom require demonstrations to be made. This apparently means that the people Lansden has so far been in touch with have had some experience with electric wagons and know what to expect from them; but if our advertising is effective and results in inquiries, there would not be many concerns who have had absolutely no experience with motor vehicles and who may be very glad to have a demonstration made. This is undoubtedly the right idea, because Mr. Hanson told me that sometimes the Electric Vehicle Company went so far as to actually build special wagons and put them in on a month's trial, with the right to return them if unsatisfactory.

Orders from James A. Hearn were received a few days ago

T. A. Edison.

(2)

3/14/10.

amounting to \$21,000, comprising, as I remember, two 3-ton trucks and about 15 chassis, exclusive of bodies, ~~chassis~~ and batteries. Hearn intends to use old bodies for these chassis and to employ old lead batteries in them until they are worn out and then to get Edison batteries.

Yours very truly,

FLD/IWW

Form No. 260.

**THE WESTERN UNION TELEGRAPH COMPANY.**

INCORPORATED

**24,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.**

ROBERT C. CLOWRY, President and General Manager.

Receiver's No.	Time Filed	Check
----------------	------------	-------

**SEND** the following message subject to the terms  
on back hereof, which are hereby agreed to.

(Night Letter)

April 1, 1910.

Thomas A. Edison,  
Fort Myers, Florida.

Steinway sold all horse vehicles and in market for ten trucks.  
General Vehicle Company offer to guarantee batteries for three  
years. Steinway probably accept offer unless we make similar  
~~guarantee~~ guarantee. Do you object Lamsden Company guaranteeing  
our batteries three years? Even if we did not guarantee we would  
make good if batteries failed within three years. Guarantee  
would be based on observance of best treatment. Think we should  
do this. Do you approve?

(Chg. Lamsden Co.)

Dyer.

*Telephoned*

**THE WESTERN UNION TELEGRAPH COMPANY.**  
INCORPORATED  
24,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.

THIS IS AN UNREPEATED MESSAGE, and is delivered by request of the sender, under the conditions named above.

ROBERT C. CLOWRY, President and General Manager.

11-330

NUMBER	SENT BY	REC'D BY	CHECK

NUMBER	SENT BY	RECD BY	CHECK
26	3/20	16 Paich	

**RECEIVED** at 236 Main St., Orange, N. J. Telephone 96

Dated Feb 11 1968 Miss (Fla?)

To Frank L. Dyer

Edison Laboratory

Have standard guarantee  
batteries three years case  
in wording guarantee they  
to do exactly as instructions.  
Edison

515

Orange, N. J., April 5, 1910.

J. M. Lonsden, Jr., Esq.,

The Lonsden Company,

Newark, N. J.

Dear Sir:

The bearer, Mr. Richard E. Dyer, is my nephew and is the young man I spoke to you about some time ago who wants to start in and acquire a business experience. You said that you had an opening for him, and I will be much obliged if you will take him on and give him something to do. I leave the matter of salary and duties entirely to you.

Yours very truly,

FIL/IWW

515  
Orange, N. J., April 12, 1910.

Mr. F. A. Whitten,

The Lansdon Company,

54 Laekawanna Ave., Newark, N. J.

Dear Sir:

Yours of the 8th inst. has been received with enclosed guarantee which you propose to make on the Edison battery for Steinway & Sons. I have gone over this guarantee with Mr. Holland and we have made a number of changes, as shown in lead pencil. As thus changed, I have approved the guarantee. I think these changes will be quite clear to you and will not in any way affect the effectiveness of the guarantee.

It is not clear that the guarantee means by the expression "Full working capacity as rated". It might mean that we guarantee the battery to drive the vehicle the rated distance per charge and it might mean that we guarantee the battery to give the rating adopted by the Storage Battery Company. It is just as well, however, that this indefiniteness should exist, because it gives us the opportunity of adopting either interpretation.

I also beg to return herewith the copy of the Steinway contract.

Yours very truly,

[FROM ISAAC W. WALKER]

815  
Momo.

(4/19/10)

I called up Mr. Whitten of the Lansdon Company this morning and asked when the catalogue would be finished. He said he would have it ready to submit to the printers in a few days so that they could prepare a dummy, after which it would take about three or four weeks to print up the catalogue. He said the delay was caused by the fact that they had to get new motors to be operated by the new storage battery due to the lower voltage, and that these motors necessarily had to be tested out and new ratings obtained with their use.

4/19/10.

I. W. W.

THE LANSING COMPANY

*Edison*

Report upon Examination of Accounts  
for the period 1st December, to 28th February, 1910.

LYBRAND, ROSS BROS. & MONTGOMERY  
CERTIFIED PUBLIC ACCOUNTANTS

NEW YORK  
165 BROADWAY

PITTSBURGH  
UNION BANK BUILDING

PHILADELPHIA  
LAND TITLE BUILDING

CHICAGO  
FIRST NATIONAL BANK BUILDING

*Lybrand, Ross Bros. & Montgomery*

CERTIFIED PUBLIC ACCOUNTANTS

WILLIAM H. LYBRAND    LEONARD ROSS  
ADAM A. ROSS        ROBERT H. MONTGOMERY  
JOSEPH H. PUGH

PHILADELPHIA LAND TITLE BUILDING  
NEW YORK 165 BROADWAY  
PITTSBURGH UNION BANK BUILDING  
CHICAGO FIRST NATIONAL BANK BUILDING

New York, 25th April, 1910.

Mr. Thomas A. Edison,  
Orange, New Jersey.

Dear Sir:

We submit herewith our report on the  
audit of the accounts of the

LANSDEN COMPANY

for the three months ended 28th February, 1910.

While the loss for the last three months has been  
\$4,670.30, this is a very material reduction from the loss  
of the preceding three months which was \$10,430.77.

The decrease in loss arises from the fact that the  
volume of business has about doubled, while the fixed charges  
and other general expenses have remained substantially the  
same as for the preceding period.

The usual statements are annexed showing the Orders in  
Process and the Completed Machines. It is doubtless under-  
stood that the earlier numbers of the orders in process include  
costs of work which was largely experimental. As these  
orders are finally disposed of there will necessarily be some  
loss in the process, but this loss will be absorbed in the  
current accounts from month to month.

A statement is annexed showing the unfilled orders as  
of 31st March, 1910, which aggregate \$65,312.50.

Among the assets appears the cost up to 28th of February  
of improvements at 233 and 235 High Street. This account  
has been added to since, but it is proposed that ultimately it  
shall all be absorbed in the current operating by charging off  
a part of it from month to month.

Very truly yours,

*Lybrand, Ross Bros. & Montgomery*

# THE LANSDEN COMPANY

Comparative BALANCE SHEETS, 30th November, 1909 and 28th February, 1910.

	1910 28th Feby	1909 30th Novr
<b>A S S E T S:</b>		
<b>P l a n t:</b>		
Machinery . . . . .	\$ 5,806.11	\$ 3,198.74
Tools, Jigs, &c. . . . .	3,096.11	2,713.64
Office Furniture, &c. . . . .	3,403.12	2,984.01
Patterns, Templates, Dies, &c. . . . .	2,248.62	2,210.42
Drawings, Blue Prints, &c. . . . .	8,539.12	8,524.30
	<u>23,089.08</u>	<u>17,631.11</u>
Completed Machines . . . . .	15,516.70	20,022.59
Orders in Process . . . . .	25,258.39	22,148.63
Materials, Supplies and Finished Parts . . . . .	25,212.61	23,928.37
Accounts Receivable . . . . .	31,132.13	9,936.04
C a s h . . . . .	1,492.79	1,176.91
Improvement Account 233 - 235 High St. . . . .	926.41	
Prepaid Expenses . . . . .	313.55	456.99
Good Will . . . . .	5,000.00	3,000.00
<b>Total Assets</b>	<u>\$125,941.66</u>	<u>\$100,300.64</u>
<b>LIABILITIES:</b>		
Notes and Accounts Payable . . . . .	\$36,960.50	\$20,014.27
Accrued Wages, &c. . . . .	1,370.64	505.55
Loans from T.A. Edison and National Phonograph Co. . . . .	93,500.00	81,000.00
<b>Total Liabilities</b>	<u>\$131,831.14</u>	<u>\$101,519.82</u>
<b>Excess of Liabilities</b>	<u>\$ 5,889.48</u>	<u>\$ 1,219.18</u>
<b>CAPITAL STOCK and SURPLUS:</b>		
Capital Stock . . . . .	\$30,000.00	\$30,000.00
Deficit . . . . .	<u>35,889.48</u>	<u>31,219.18</u>
	<u>\$ 5,889.48</u>	<u>\$ 1,219.18</u>

# PRODUCTION ACCOUNT

	3 Months to 28th Feby 1910	3 Months to 30th Novr 1909
<u>Credits:</u>		
Valuation put on Finished Parts produced . . .	\$ 1,960.41	\$ 7,773.91
" " " Completed Machines produced . . .	40,758.29	16,543.15
Increase in Orders in Process . . . . .	<u>3,109.76</u>	<u>2,846.36</u>
	<u>\$45,828.46</u>	<u>\$27,163.42</u>
<u>Debits:</u>		
Cost of Material, including batteries . . .	\$25,540.27	\$15,203.45
" " Direct Labor . . . . .	8,953.31	5,924.83
Part of Expenses added to costs approximately 50% of direct labor and material after ex- cluding batteries . . . . .	<u>11,334.88</u>	<u>6,035.14</u>
	<u>\$45,828.46</u>	<u>\$27,163.42</u>

# SALES ACCOUNT

<u>Credits:</u>		
Sales of Machines . . . . .	\$44,332.50	\$21,760.00
" " Parts, Repairs, &c. . . . .	<u>1,917.27</u>	<u>4,940.50</u>
	46,249.77	26,700.50
Cost of Sales . . . . .	<u>44,202.54</u>	<u>23,839.18</u>
Profit on Sales . . . . .	<u>\$ 2,047.23</u>	<u>\$ 2,861.32</u>

# PROFIT and LOSS ACCOUNT

Profit on Sales as above . . . . .	\$ 2,047.23	\$ 2,861.32
Expenses, including Salaries, Advertising, Maintenance, Experimental, &c. as annexed . . . . .	\$18,052.41	\$19,327.23
Less: Part of Expenses charged against cost of product as shown in Production Account . . . . .	<u>11,334.88</u>	<u>6,035.14</u>
Balance of Expenses charged off . . . . .	<u>6,717.53</u>	<u>13,292.09</u>
Loss for three months to 28th February, 1910 . . . . .	<u>\$4,670.30</u>	<u>\$10,430.77</u>

# E x p e n s e s .

	3 Months 28th Feby 1910	3 Months to 30th Novr 1909
Experimental . . . . .	\$ 1,173.14	\$ 1,348.95
Maintenance . . . . .	1,890.93	1,276.36
Shipping, Receiving, &c. . . . .	397.74	435.90
R e n t . . . . .	845.00	345.00
Supplies . . . . .	294.68	338.33
P o w e r . . . . .	192.21	272.71
Heat, Light, Water, &c. . . . .	391.40	235.36
Insurance . . . . .	189.24	181.61
L a b o r . . . . .	191.69	157.69
Freight and Cartage . . . . .	230.81	152.96
T a x e s . . . . .	13.86	25.54
Salaries . . . . .	6,003.07	5,541.53
Guaranteed Maintenance . . . . .	1,662.58	3,586.26
Advertising . . . . .	549.84	1,849.81
Photographs . . . . .	96.69	862.41
Commission . . . . .	1,725.25	726.03
Stationery & Printing . . . . .	223.36	457.64
Sales Expense . . . . .	492.30	450.00
Miscellaneous . . . . .	1,304.00	621.81
Travelling . . . . .	184.05	337.60
Telephone and Telegraph . . . . .	68.99	91.79
Postage . . . . .	52.25	90.75
Discount and Exchange . . . . .	<u>120.67</u>	<u>58.81</u>
	<u>\$18,052.41</u>	<u>\$19,327.23</u>

COMPLETED MACHINES  
as at 28th February, 1910.

1 Electrette . . . . .		\$ 1,850.00
1 Delivery Wagon . . . . .		1,000.00
1 Electrette 3/4 complete . . . . .		1,459.42
1 Four wheeled baggage truck . . . . .		1,124.56
1 Taxicab . . . . .		2,766.77
1 Panel Wagon (Show) . . . . .		1,480.00
1 Standard Express Wagon Body . . . . .		450.00
1 Type 46 G Body . . . . .		155.14
2 " 36 A Express Wagon Bodies @ \$147.88		295.76
2 " 36 H Sides Rack Bodies @ \$192.84		385.68
3 " 46 A Express Bodies @ \$187.83		563.48
1 " 36 Chassis (grey Wagon) . . . . .		788.68
1 E. V. Express Wagon . . . . .		300.00
1 Type 36 Platform Body for testing . . . . .		121.00
1 E. V. Chassis from Macy . . . . .		200.00
1 Type 3 wheeled truck . . . . .		1,106.21
1 " 167 E Wagon (#364) . . . . .		<u>1,470.00</u>
		<u>\$15,516.70</u>

Transferred to page 2.

ORDERS in PROCESS, 28th February, 1910.

<u>Order No.</u>	<u>Name</u>	<u>Amount</u>
2168	Red Touring Car . . . . .	\$ 1,756.63
2357	Disassemble Brown Touring Car . . . . .	1,676.12
2530	10 Taxicab Bodies . . . . .	1,249.46
2534	11 Taxicab Chasses . . . . .	260.71
2542	5 Chasses Type 46 . . . . .	1,077.21
2597	Taxicab Test Car . . . . .	3,123.71
2601	1 Taxicab Body - F. L. Dyer . . . . .	714.32
2602	1 " Chassis " " . . . . .	2,124.24
2755	1 Body for Runabout . . . . .	108.13
2891	Body for J. C. Meyers Co. . . . .	259.24
2892	Chassis " " " . . . . .	880.96
2895	Repairs on Edison Blue Car . . . . .	262.92
2927	25 St. Gear Sectors . . . . .	144.45
2936	3 Chasses for Higbee Company . . . . .	3,534.71
2937	3 Panel Wagon bodies for the Higbee Co. . . . .	717.75
2938	2 - 3 Wheel Industrial Trucks for Hamburg American Line . . . . .	2,771.13
2944	Chassis for Robert Gair . . . . .	896.41
2945	Body " " " . . . . .	298.26
2946	Chassis for Columbia Storage Warehouse Co. . . . .	549.46
2947	Body " " " . . . . .	126.30
2973	1 Chassis for Edison Chemical Co. . . . .	866.64
2975	10 Chasses for Abraham & Strauss . . . . .	1,074.36
2976	10 Bodies " " " . . . . .	185.74
	Miscellaneous . . . . .	579.53
		<u>\$25,258.39</u>

Transferred to page 2 .

Unfilled orders and contracts 31st March, 1910.

Columbia Storage Warehouses, N.Y. City

1 Type 36 E Panel Wagon	\$ 2,817.50
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Edison Chemical Works, Silver Lake, N. J.

1 Type 46 G Truck	3,450.00
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Abraham & Strauss, Brooklyn, N. Y.

10 Type 136 E Panel Wagons	29,000.00
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Otis Elevator Co., Yonkers, N. Y.

1 Type G Warehouse Truck	2,200.00
2 " " " "	3,050.00

Jas. A. Hearn & Son, New York, N. Y.

2 Type 66 H Trucks	4,395.00
16 " 36 Chasses	16,800.00

Steinway & Sons, New York, N. Y.

1 Type 46 H Piano Wagon	<u>3,600.00</u>
-------------------------	-----------------

<u>\$65,312.50</u>
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*auto*

LANDSEN & LANDSEN  
DISTRICT COUNSEL  
MOBILE & OHIO RAILROAD COMPANY  
214 COMMERCIAL AVENUE

CAIRO, ILLINOIS, July 5, 1910.

Mr. Thomas A. Edison,  
Edison Laboratory,

West Orange, N.J.

JUL 8-1910  
*Ans 7/9*

My dear Mr. Edison:-

Leaving Newark last Saturday a few days before I had expected I was not able to see you regarding a letter to Mr. Samuel Insull. After a short visit with my relatives here in Cairo I am going on to Chicago and I think it would be well to have our man there meet Mr. Insull. If you will give me a letter of introduction and forward to me here in Cairo, I will call upon Mr. Insull with our man Klingelsmith, who has a number of good "prospects" in Chicago.

I expect to be back around the middle of the month. Incidentally, Cairo is not the coolest place for a visit, but was a good town in which to receive returns of the recent, much lamented prize fight.

Yours truly,

JML-S

*John M. Landsen*  
*President*

*Harry Conner Letter -*

*My Dear Insull: This will introduce  
Mr. J. M. Landsen who has charge of the  
Lansden Electric Company in which I  
am interested. Any information you  
can give him will be appreciated.*

REFER TO THIS NUMBER  
IN YOUR REPLY

1578

515

# MEMORANDUM

FRANK L. DYER,  
ORANGE, N. J.

November 4, 1910.

Mr. Holden:-

Referring to my memorandum of October 21st to Mr. Churchill, you will note that Mr. Lonsden has now carried out all the conditions of the original arrangement with Mr. Edison, so that I can now transfer the stock I hold as trustee to Mr. Edison. Please see that this is done. Of course, I want to retain at least one share to qualify me as an officer and director. After the stock has been transferred to Mr. Edison, please return the original letter to Mr. Miller, dated August 31, 1908. The matter of continuing Mr. Lonsden as general manager will be held in abeyance.

F. L. D.

FLD/ARK.

THE LANSDEN COMPANY, NEWARK, N. J.

Financial Statement at Close of Month Ending December 31st, 1910.

ASSETS	
Cash	214,090
Accounts Receivable	200,643
Notes Receivable	
Plant	289,848.5
Company's Machines	285,000
Materials and Supplies	468,211.8
Orders in Process	734,019.3
Complete Machines	240,084.7
Premiums on unexpired Insurance	249.88
Undistributed Taxes	217.11
Improvement Account at High Street	878.06
Fruhk L. Dyer, Trustee	300,000
<hr/>	
Total	2,026,188.1

*Handwritten:* Need to file

LIABILITIES	
Accounts Payable	789,321.8
Notes Payable	1,274,000.0
Accrued Expense	114,806.2
Capital Stock	300,000.0
<hr/>	
Total	2,378,128.0

SUMMARY	
Assets	2,026,188.1
Liabilities	2,378,128.0
Net <del>Income</del> Loss	351,939.9

*Unfilled Orders and Contracts*

Hon. Geo. Parsons	1 Type 516-G Car	3150 00
Cairo, Ills.		
Robert Gair Co.	1 Type X-E 5 ton truck	5240 00
Brooklyn, N. Y.		
Gimbel Brothers	4 Type 176-E Delivery Wagon	1060 00
New York, N.Y.	4 Type 136-E Delivery Wagon	110 00
	4 Type 136ED Delivery Wagon	1080 00
Eugene E. Rice	1 Type 36-A Wagon	2450 00
Philadelphia, Pa.		
Pioneer Warehouses	1 Type 216 Chassis	3520 00
Brooklyn, N. Y.		
T. K. Orten	1 Type Baker Wagon	2550 00
Bridgeport, Conn.		
Boston Rubber Shoe Co.	1 Type 46-A Truck	3200 00
Malden, Mass.		
George Shret	2 Rebuilt Trucks	447 60
New York, N. Y.		
Armour & Company	1 Type 66 Chassis	399 40
Chicago, Ill.		
Eagle Warehouse & Storage Co.	1 Type 216-E Wagon	4120 00
Brooklyn, N. Y.		
New York Edison Company	1 Type B6-E Wagon	4297 00
New York, N. Y.		
Hamburg-American Line	4 Type 606-G Dock Trucks	100 00
Hoboken, N. J.		
C. O. Olson Cartage Co.	1 Type 136-E Panel Wagon	3050 00
Chicago, Ill.		
Total		38158 00

SUMMARY OF VARIOUS ITEMS AS SHOWN ON FINANCIAL AND  
OPERATING STATEMENT FOR MONTH ENDING DECEMBER 31st, 1910.

COMPANY'S MACHINES

One Electrette	\$1850.00
One Delivery Wagon	<u>1000.00</u> \$2850.00

COMPLETE MACHINES

One 4 wheeled baggage truck	1124.56
One Taxicab	2766.77
One Standard Express Wagon Body	450.00
One Type 26H Side Rack Body	192.84
One Type 46A Express Body	187.82
One Type 36 chassis, Grey Wagon	788.68
One E. V. Express Wagon	300.00
One Type 3 wheeled truck	1106.21
One Type 36 Platform body for testing	121.00
One E. V. Chassis (Hacy)	200.00
One Type 126-H Rack Truck complete #455 (Show)	1534.94 no battery
One Type 166-H Patrol Wagon Comp. #476 (Phila)	3000.02
One Type 136-E Panel Wagon Comp. #446 (Boston)	2864.07
One Type 136EE Panel Wagon Comp. #448 (Chicago)	2716.18
One Type 226-M Truck Complete #454 (Cleveland)	2841.41
One Type 3 wheeled truck "Kelly" Comp. (Show)	1399.77
One Type 3 wheeled truck (no battery)	1078.76
One Type 136 Chassis 124" wheel base (no Batt)	<u>1348.44</u> \$24008.47

PLANT

Machinery	9294.87
Instruments & Tools	4257.89
Furniture & Fixtures	4218.18
Patterns, Templates & Dies	2673.59
Drawings & Designs	<u>8540.32</u> \$28984.85

IMPROVEMENT

Interior Buildings, fittings, etc. at High St.	<u>378.06</u> \$378.06
--	------------------------

ACCURED EXPENSE

Wages due Pay-Roll	1281.71
2 " Night-watchmen, Janitors, Etc.	68.84
" " Store-keepers	75.79
" " Garage-man	28.57
" " Demonstrator at Chicago	<u>25.71</u> \$1480.62

ORDERS IN PROCESS, DECEMBER 31st., 1910.

2357	\$1678.12
2530	1136.06
2534	261.88
2542	600.00
2597	3123.71
2601	714.32
2602	2154.24
2756	108.13
2814	1828.60
3232	142.38
3328	764.59
3330	2863.64
3331	668.01
3400	254.66
3461	1784.11
3459	27018.70
3460	3.65
3463	185.18
3464	201.15
3490	11466.70
3517	313.37
3518	1926.95
3529	19.02
3547	4002.86
3562	599.36
3570	217.35
3570	28.10
3580	25.31
3581	135.69
3585	37.04
3586	182.15
3588	96.99
3589	86.33
3590	33.78
3591	60.39
3592	112.62
3600	17.55
3602	233.93
3603	1189.13
3606	1860.07
3609	6.24
3610	6.24
3613	51.03
3614	154.92
3617	3.65
3624	468.37
3627	457.51
3628	1271.09
3637	180.74
3662	6.55
3666	107.05
3667	1044.60
3669	171.61
3671	817.67
3676	2.20
3679	1.15
3680	12.06
3681	52.40
3683	3.93
3694	525.74
3695	120.00
3696	19.31
3697	3.40
3698	.95
3699	4.28
3690	6.03

TOTAL ORDERS IN PROCESS

\$75401.93

SUMMARY OF ACCOUNTS RECEIVABLE AS OF DECEMBER 31st, 1910.

Abraham & Straus	58.01
The Acme Garage	8.85
Adams Express Company	39.90
Adams Vehicle Company N.H. & Phila.	194.52
Adams Vehicle Company Ind. & Rochester	50.06
Adams Vehicle Company N.Y. & Washington	1207.00
The Arlington Company	3.00
Bayonne Hospital	3000.00
Bellevue & Allied Hospitals	1.50
California Electric Garage Co.	2.85
Central Smelting Works (Samuel Rosen)	174.02
Chamberlin Auto Company	27.55
Carew Manufacturing Co.	6.00
Columbia Storage Warehouses	3.60
F. L. Dyer	32.65
Thomas A. Edison	306.94
Edison Chemical Works	159.44
Edison Phonograph Works	122.98
The Empire State Dairy Co.	1.10
Fairfield Dairy Company	53.20
Federal Storage Battery Car Co.	18.35
Firestone Tire & Rubber Co.	.76
Forbes & Wallace	4.05
Gimbel Brothers	56.80
Robert Gair Company	10.00
Globe Storage & Carpet Cleaning Co.	9.30
Green Car Sight Seeing Co.	7.25
The Halle Bros. Co.	147.45
Hamburg-American Line	39.35
James A. Hearn & Son	402.17
A. G. Hyde & Sons	14.15
A. Luchow	.96
R. H. Macy & Co.	319.11
Mandel Brothers	2950.00
John G. Myers Co.	4.80
New York Telephone Company	15.45
New York Transportation Company	11.50
T. Shea (N.Y. & Springfield Despatch)	19.16
Siegle Cooper Co.	28.05
J. H. Street	60.60
J. H. Small & Sons	3100.00
Spaulding & Co.	156.00
Springfield Waste Company	4.80
Steinway & Sons	61.01
Oscar Tamm	95.10
United Electric Company of New Jersey	25.00
United States Express Company	22.80
Wells Fargo & Company Express	166.63
The Williams Printing Co.	3252.25
Winchester Repeating Arms Co.	54.50
Wright-Pickinson Hotel Company	5500.00
F. J. Newcomb Mfg. Co.	8.00
TOTAL	<u>\$20066.43</u>

SUMMARY OF ACCOUNTS PAYABLE AS OF DECEMBER 31st, 1910.

Acme Drill Co.	2.58
Amberg File & Index Co.	4.50
The Berger Manufacturing Co	108.15
Achille Battilla & Co.	14.00
Bonister & Pollard Co.	14.70
The Barlow Foundry Co.	160.78
Baldwin Chain & Mfg. Co.	429.75
Bettes & Ebeeen	5.30
Briscoe Mfg. Co.	61.75
The Billings & Spencer Co.	145.20
Brown-Lipe Gear Co.	342.40
Edward V. Brokaw & Bro.	15.25
Cary Spring Works	45.00
Carter White Lead Co.	37.50
The W.T. Crane Carriage Hardware Co.	486.19
James A. Coe & Co.	4.23
C. Cowles & Co.	68.79
The Crosby Company	10.80
DeForge Belting Company	14.80
Diamond Rubber Co.	6.10
Driver-Harris Wire Co.	17.66
Thomas A. Edison	1570.62
Electric Motor & Equipment Co.	41.39
The Electric Welding Products Co.	89.66
Joseph F. Eberhard & Son Inc.	17.34
Edison Storage Battery Co.	51048.14
Empire Auto Supply Co.	7.81
The English Mersick Co.	12.00
Faitoute Iron & Steel Company	348.28
Peter A. Frasse & Co.	201.42
The Firestone Tire & Rubber Co.	740.12
Freight Handlers' & Railway Clerks' Journal	15.00
General Electric Company	8689.22
G. A. Goldsmith	345.18
The Goodyear Tire & Rubber Co.	544.72
Groebel-McGovern Company	35.75
Hahne & Co.	5.00
The Halle Bros. Co.	18.75
Walter J. Harper Co.	16.85
Edmund F. Heath & Son	75.35
George Healy	3.90
The Hess-Bright Manufacturing Co.	26.10
S. B. Howard	170.00
T. P. Howell & Co.	157.42
U. T. Hungerford Brass & Copper Co.	30.53
Hyatt Roller Bearing Company	20.40
J. J. Hooker & Co.	23.41
Industrial Wire & Metal Works	77.60
International Engineering Co.	9.88
International Time Recording Co.	2.00
CARRIED FORWARD-----	65347.16

SUMMARY OF ACCOUNTS PAYABLE AS OF DECEMBER 31st, 1911. (continued)

	BROUGHT FORWARD-----	66547.16
H. A. Jaeger		6.00
Hineas Jones & Co.		21.85
William A. Jones & Son		1048.24
W. H. Kemp Co.		17.40
Keuffel & Esser Co.		13.70
The Kuebler Foundries Inc.		943.32
Lebanon Steel Casting Company		1759.37
E. B. Leonard		99.01
The Lockwood Company		11.31
Ludlow & Squier		34.20
Lybrand, Ross Bros. & Montgomery		205.54
Manhattan Electrical Supply Co.		9.49
Massachusetts Chemical Co.		15.00
Miller & Company		9.45
Murphy Varnish Company		432.24
Nanz Clock Company		2.50
Newark Machine Company		275.00
The New Departure Mfg. Co.		20.30
New York Telephone Co.		57.30
The National Saw Company		13.97
Newark Glass Co.		35.28
New York Transportation Co.		119.09
Eugene E. Rice		8.14
The Roera Manufacturing Company		5.50
The Oelkers Mfg. Co.		12.40
T. E. Orton		350.00
Charles R. Partridge Lumber Co.		345.63
Public Service Electric Company		269.88
Public Service Gas Company		4.00
W. Peterson		88.52
Rising & Thorne		23.56
Riverside Steel Casting Co.		3.51
Roe & Conover		312.65
Royal Ribbon & Carbon Co.		29.29
Royal Typewriter Co.		2.00
R. E. Rodriguez		3.60
Saugamo Electric Company		874.80
Searle Manufacturing Co.		31.12
D. P. Segelike		37.01
Shaw & Potter		27.10
Singer Sewing Machine Company		5.89
Standard Oil Co.		9.41
Thomas A. Sanford Co.		3.06
The Standard Welding Co.		9.00
Strioby & Foote Co.		.15
Spring Perch Company		1413.02
The Schwarz Wheel Company		573.57
The Scooville & Peck Co.		10.50
J. H. Sliker		8.25
Frederick H. Sommer		2.70
S. A. Stephens		4.25
The Rea Reay Co. of Newark, N. J.		6.71
Tolar, Hart & Co.		41.20
United Manufacturers		3.28
The Veeder Mfg. Co.		132.19
O. F. Vogeler & Son		11.71
The Wagner-Field Co.		988.00
Warner Instrument Co.		56.57
The Whitney Mfg. Co.		472.57
Magnus Wilson Company		1027.19
Joel H. Woodman		217.33
Orlando W. Young		10.80

TOTAL ----- 87932.16

Dyer -

I think you should  
go down & look the Lunsden  
works over - ~~He~~ Have him  
finish up the Experimental  
Vehicles he has now & then  
hereafter under no circumstances  
make anything new or  
start any Experiment (or)  
only build Standard Trucks.  
Lunsden has no ability as an  
Experimenter & allowing him to  
go ahead is throwing away  
money

Edison

The members of the Fursten wagon  
were the first to realize that ~~the~~  
~~lead battery~~ no permanent business  
could be built up in their line  
if success depended on the <sup>a battery employing</sup> lead  
Sulphuric acid combination ~~battery~~  
That the dissatisfaction expressed  
by so many owners ~~of~~ using  
this kind of battery ~~would not~~  
~~be overcome by the fact that~~ <sup>budgeted out in</sup>  
~~business for spreading opinions~~  
that the Electric Truck was  
not as successful ~~as the~~ But upon  
the advent of the Original Chloral  
Battery they realized that  
if the battery would accomplish  
what the inventor claimed or  
come anywhere near it that  
a permanent business

2  
could be built up based  
upon the "Satisfied Customer" idea  
<sup>of doing business</sup>  
At the time the Fursten Bros  
entered the field there were only  
3 or 4 ~~other~~ <sup>types of</sup> Electric  
Trucks and most of these <sup>old</sup> ~~were~~ soon  
been abandoned by their owner  
not on account of the vehicle  
themselves but the uncertainty  
of excessive cost of maintenance  
of the lead batteries, some few  
~~of~~ <sup>one</sup> of the trucks continued  
to give fair service where  
a firm had several in use  
& employed an expert  
to take care of them <sup>in their</sup>  
own garage - but the  
majority in isolated places  
were in almost all cases  
abandoned - The Vehicles

3

while well made & serviceable  
were too heavy & stiff +

The idea ~~being~~ of their design  
probably being that the more  
rigid & solid the construction  
the longer they would last.  
The Laiden Bros perceived  
that this was an entirely wrong  
view, that no machinery gets  
more jolt & jare than a ~~fast~~  
rapid moving truck heavily  
loaded & that elasticity  
of construction with a large  
factor of safety was the  
key to the construction of  
a long lived vehicle.  
The ~~fact~~ The extreme lightness  
of weight of the Laiden  
Bullock was a great  
advantage in such

4

a construction.

The Laiden Co were the first  
to use a deep trussed  
frame in fact. Trussing of  
frames is even now not used  
in automobiles, although  
universal in every kind of  
Railway Car - Bridge roof  
or construction where strength  
& lightness is required.

Again the Laiden Co never used  
a driving gears on their vehicle  
only chains are used, gears cannot  
be kept in pilot line except in  
rigid constructions, & this class  
of construction has no place  
in vehicles. The ~~high~~ <sup>high</sup> violent  
stresses which must pass <sup>drive</sup> between  
the teeth of a small gear

is too much for any metal  
 they in many cases reach the  
 tearing point. The gear wears,  
 gets out of pitch line &  
 becomes noisy & finally  
 breaks, generally the consequence  
 is such that it cannot  
 be put in where the accident  
 occurs hence it must  
 be hauled to a garage

With chain driven vehicles  
 you have the elasticity  
 of the chain to reduce  
 the <sup>load</sup> high stress to one spread over  
 a longer time. The chain engages  
 several large teeth in the  
 sprocket. No amount of stress  
 will break these teeth  
 & only thing to break is

is the chain - when  
 this occurs ~~it is~~  
 a new link can be put  
 in anywhere in 5 minutes  
<sup>This principle is now after many years followed and</sup>  
~~that~~ in the Gavalone Car <sup>applied</sup>  
 Most of them are shaft driven  
 by a bevel gear simply  
 because the public wanted  
 the car more roadable, but on  
 High power & Racing Machines  
 the chain is still used

~~again~~  
 Again the Foxenden Co  
~~have~~ have made but never  
 sold Trucks having ball  
 bearings on their axles -  
 & the reason is that test  
 have shown ~~that~~ just  
 the contrary to the popular

7

believe that there is no gain from their use. but on the contrary there are a complication

Ball bearings are good in their place where the pressures are not high, But on the axle of an Electric Truck they are of a positive disadvantage -

It is probably assumed that because two vehicles one with & one without ball bearings, The ~~same~~ ~~with the~~ former is equally

8

pushed across the garage floor while the latter requires considerable force that there is a great advantage is ball bearings -

They forget that with the plain bearing the metals are in contact at the slow speed & only when running does the oil lubrication come into play <sup>then owing to unevenness of road oil lubrication is at its best whilst in plain bearing it is a matter of only the same when the</sup> They also distribute that

the pressure on the ball bearings at all times is only the weight of  $\frac{1}{4}$  of the vehicle. This is very far from the case ~~if the vehicle is going~~

and ball bearings are not the same as plain bearings

over a rough road the blow delivered to the ~~whole~~ <sup>whole</sup> ~~rubber~~ <sup>rubber</sup> tire ~~to the~~ wheel & thence to the ball bearing ~~which~~ <sup>gives high stresses amounting</sup> ~~at~~ <sup>at</sup> times to many times the whole weight of the vehicle & load ~~under~~ <sup>under</sup> these stresses the balls deform because they are hardened & under great internal strain & the supposed gain is not made but become a source of trouble. The proper place for ball bearings ~~is~~ <sup>is</sup> on the motor or jack shaft -

The latest steel cars of 100000 lbs capacity now so largely used on Railways

for hauling Coal weigh only 39000 lbs - which figures out 1 pound of car hauls  $2\frac{1}{2}$  pounds of load, While the ~~Lanston Co~~ <sup>Lanston Co</sup> have not reached this point they have come fairly near it, more so than one of its competitors who have built for our concern 25 vehicles each weighing 4000 pounds & which owing to the nature of the business conducted by the concerned never ~~are~~ <sup>are</sup> called upon to carry over 500 pounds,

If this factor was used on the Coal Car we would have 39000 lbs of Car <sup>handling</sup> 4875 lbs of Coal

Take the Lausden 1 ton truck, which is designed to carry 60 cells of the Edison A4 battery <sup>rated at 10800 watts</sup> ~~some say 10000~~ a load of 1 ton, ~~the vehicle~~ <sup>we get a mileage of</sup> ~~strengthening~~ <sup>1360 lbs</sup>

If we substitute the lightest Weight Lead Battery of 36 cells - giving 12000 watts & weighing 1550 lbs - we overload the vehicle. The difference between 870 lbs & 1550 lbs is 680 lbs. Evidently if we are to keep our strength the same we cannot carry a ton but only 1320 lbs but supposing we overload

the vehicle 680 lbs - and the vehicle with Edison battery weighed 2 tons then at 100 cells per ton mile we shall get a mileage from the 10800 watts of 54 miles, whereas with the substitution of the Lead battery we get <sup>with 12000 watts</sup> a mileage of 51.2 miles - but if the vehicle was strengthened on the principle that 1 lb of vehicle pulls a lb of freight then the vehicle would have to be increased <sup>680 lbs plus with the 680 lbs of lead battery</sup> 1360 lbs to use the lead battery it would weigh loaded 5360 lbs instead of 4000 lbs + the mileage would be reduced from 54 to 44.7

As the present price of chassis  
various from 70 to 90/-  
(Cents per pound + and) as  
680 lbs of Extra chassis  
must be built to carry  
the Extra weight of the  
Lead Battery it will be  
seen that the low price  
of the Battery is only  
apparent as a matter  
of fact it is first cost  
taken in connection with  
the Extra Cost of the vehicle  
is greater than the Edison  
Battery, with less mileage  
and a much greater expense  
for Current,

Lansden /

The makers of the Lansden wagon were the first to realize that no permanent business could be built up in their line if success depended on a battery employing the lead sulphuric acid combination. That the dissatisfaction expressed by so many owners using this kind of battery radiating out in all directions opinions that the electric truck was not a success. But upon the advent of the original Edison battery they realized that if the battery would accomplish what the inventor claimed or come anywhere near it that a permanent business could be built up based upon the "satisfied customer" idea of doing business.

At the time the Lonsden Brothers entered the field there were only three or four manufacturers of electric trucks and most of those sold were soon abandoned by their owners not on account of the vehicles themselves but the uncertainty and excessive cost of maintenance of the lead batteries; some few of the trucks continued to give fair service where a firm had several in use, and employed an expert and took care of the batteries in their own garage - but the majority in isolated places were in almost all cases abandoned. The vehicles, while well made and serviceable, were too heavy and stiff; the idea of

their designer probably being that the more rigid and solid the construction the longer they would last. The Lonsden Brothers perceived that this was an entirely wrong view, that no machinery gets more jolts and jars than a rapid moving truck heavily loaded and that elasticity of construction with a large factor of safety, was the key to the construction of long lived vehicles. The extreme lightness of weight of the Edison Battery was a great advantage in such a construction.

The Lonsden Company were the first to use a deep trussed frame, in fact trussing of frames is even now not used in auto-

mobiles, although universal in every railway car-bridge

roof or construction where strength and lightness is required.

Again, the Lansden Company never used driving gears

on their vehicles, only chains are used, gears cannot be kept in

pitch line except in rigid constructions, and this class of

construction has no place in vehicles. The high and violent

stresses which must pass between the teeth of a small drive gear

is too much for any metal, they in many cases reach the tearing

point, the gear wears, gets out of pitch line and becomes noisy,

and finally breaks, generally the construction is such that it

cannot be put in where the accident occurs, hence it must be hauled to a garage. With chain driven vehicles you have the elasticity of the chain to reduce the sudden high stress to one spread over a longer time. The chain engages several large teeth in the sprocket; no amount of stress will break these teeth and the only thing to break is the chain - when this occurs a new link can be put in anywhere in five minutes. This practice is now after many years followed by our competitors. In the gasoline car most of them are shaft driven by a bevel gear simply because the public wanted the car more noiseless, but on high power and racing

machines the chain is still used.

Again, the Lansden Company have made, but never sold

trucks having ball bearings on their axles - and the reason is that

tests have shown just the contrary to the popular belief that

there is no gain from their use, but on the contrary there is a

complication. Ball bearings are good in their place where the

pressures are not high, but on the axles of an electric truck

they are of a positive disadvantage. It is probably assumed

that because two vehicles, one with and one without ball bearings,

the former is easily pushed across the garage floor, while the

latter requires considerable force, that there is a great advantage in ball bearings. They forget that with the plain bearing the metals are in contact at these slow speeds and only when running does the oil lubrication come into play. Then, owing to unevenness of road oil lubrication is at its best, which explains where two vehicles of exactly the same weight, one with and one without ball bearings, the one with plain bearings will give the greatest mileage for the same power. They also assume that the pressure on the ball bearing at all times is only the weight of one-fourth of the vehicle. This is very far from the case. If the vehicle is

going over a rough road the blow delivered to the solid rubber tire and wheel, and thence to the ball bearing gives high stresses amounting at times to many times the whole weight of the vehicle and load. Under these stresses the balls deform because they are hardened and under great internal strain, and the supposed gain is not made, but becomes a source of trouble. The proper place for ball bearings, if used, is on the motor or jack shaft.

The latest steel cars of 100,000 pounds capacity, now so largely used on railways, for hauling coal, weigh only 39,000 pounds - which figures out one pound of car hauls two-and a half

pounds of load. While the Lensden Company have not reached this point, they have come fairly near it, more so than one of its competitors who have built for one concern 25 vehicles each weighing 4,000 pounds, and which, owing to the nature of the business conducted by the concern could never by any probability be called upon to carry over 500 pounds. If this factor was used on the coal car we would have 39,000 pounds of car hauling <sup>4345</sup>~~2870~~ pounds of coal.\*

Take the Lensden one-ton truck which is designed to carry 60 cells of the Edison A 4 battery rated at 10,800 watt hours and

weighing 870 pounds, <sup>plus</sup> a load of one ton, we get a mileage of \_\_\_\_\_  
get figures ✓

If we substitute a light weight lead battery of 36 cells, giving

12,000 watts and weighing 1550 pounds, we over load the vehicle

the difference between 870 pounds and 1550 pounds, to-wit: 680

pounds. Evidently, if we are to keep our stresses the same we can-

not carry a ton but only 1320 pounds - but supposing we overloaded

the vehicle 680 pounds, and the vehicle with Edison battery weighed

2 tons, then at 100 watts per ton mile we shall get a mileage from

the 10,800 watts of 54 miles; whereas with the substitution of the

lead battery, we get with 12,000 watts a mileage of 51.2 miles -

but if the vehicle was strengthened on the principle that one pound

of vehicle pulls a pound of freight, then the vehicle would have to

be increased 690 pounds, and this, with the 680 pounds <sup>ahead</sup> ~~each~~ battery

gives 1360 pounds to ~~use the lead battery~~, it would weigh loaded

5360 pounds instead of 4,000 pounds, and the mileage would be re-

duced from 54 to 44.7.

As the present prices of <sup>Chassis</sup> ~~chassis~~ vary from 70 to 90 cents

per pound, and as 680 pounds of extra <sup>Chassis</sup> ~~chassis~~ must be built to carry

the extra weight of the lead battery, it will be seen that the low

price of the battery is only apparent - as a matter of fact its

first cost, taken in connection with the extra cost of the vehicle,

is greater than the Edison battery, with less mileage and a much

greater expense for current. to say nothing of its short  
life, trouble of recharging & disturbance of a  
highly organized delivery service being  
thrown out of gear by uncertainty of  
mileage —

**1910. Battery - Primary (D-10-04)**

This folder contains correspondence and other documents relating to the primary batteries produced by the Edison Manufacturing Co. The items for 1910 pertain to the manufacture and design of batteries and to sales arrangements with licensed dealers and agencies. Among the correspondents is Frank L. Dyer, vice president of the Edison Manufacturing Co.

All of the documents have been selected except for routine memoranda concerning orders and a payment to Eben G. Dodge, general manager of the Edison Storage Battery Co.

JOSEPH T. SZEK.

Battery, previously  
53 & 54, CHANCERY LANE,  
LONDON, W.C.

April 22nd. 1910.

A.T. Edison, Esq.

Llewellyn Park

Orange, County of Essex, New York, U. S. A.

Dear Sir,

I beg to hand you a reprint of a publication relating to my Primary Dry Cell. I have also a nice arrangement for Accumulator Plates which reduce the weight about 15% and more.-----

The primary cell however is fully experimented and finished and is 30% in advance of every maker in the world in capacity. The construction is cheaper and more convenient.

I have the German and American Patents.

Could you help me in your Country?.

Yours faithfully,

Jos. T. Szek.

Mr. Dyer: It is impossible to judge the value of this cell without more complete data. The cells tested must have been of unusual size because they weighed 4 lbs each, or about twice as much as the common dry cell. Many attempts have been made before to use air for removing the activity of the depolarizer, with no success. I should like to get a dozen of his cells in the standard dry cell size (2 1/2" x 6") for test. I have tested most of the standard makes in this size and could make a direct comparison.

W.E. Holland

D  
1910 Battery, Storage 5/28/10  
↓

Messrs. Hudson- Leeming- Jubert- Riehl- Redfearn- Eckert- Burton.

Mr. Riehl will take inventory on June 1st of the raw material on hand at Silver Lake used in the making of batteries. General expense items will not be included.

From June 1st all material with the exception of expense items received at Silver Lake will be charged to "Silver Lake Stock" for which an account will be opened on the books.

Mr. Hudson will receive a daily report of material used which will be entered and priced on Material Transfer Sheets. Upon completion they will be forwarded to the Accounting Department to be vouchered, Silver Lake Stock being credited and Battery account charged.

Mr. Leeming will furnish Mr. Hudson with a daily list of bills passed through his department, showing material, quantity and price of goods charged to Silver Lake. This information is for the purpose of pricing the Material Transfer Sheets.

If Mr. Riehl receives goods from stock at ~~XXXXXXXXXX~~ Orange such items as belonging to the Manufacturing Co. will be entered on the Material Transfers crediting Battery and charging Silver Lake.

All requisitions for material required at Silver Lake will be forwarded by Mr. Riehl to Mr. Hudson who will approve same and pass on to Purchasing Department.

5/28/10.

W. J. Buehler.

REFER TO THIS NUMBER  
IN YOUR REPLY

1688

*Battery Storage*  
MEMORANDUM

FRANK L. DYER,  
ORANGE, N. J.

July 5th, 1910.

Mr. J. W. Aylsworth:

I return, herewith, letter to you of the 5rd ultimo, from Mr. H. G. Aylsworth, of San Francisco.

The matter was referred to Mr. Hudson, who reports adversely on the proposition. I, therefore, cannot do anything in the matter, and wish you would write Mr. Aylsworth to this effect, explaining the situation to him.

Mr. Edison suggests that if the storage batteries for sparking purposes develop in future, this might be a thing that Mr. Aylsworth could get something out of, in connection with Mr. Nestor.

F. L. D.

Enc.

[ENCLOSURE]

June 20, 1910  
RECEIVED  
JUN 21 1910

MR. F. L. DYER:-

With the return of the attached letter from the Aylsworth Agencies Company, San Francisco, I would advise that I would not consider it good policy for us to make an arrangement with any manufacturers' agency to handle our business on the Pacific Coast. Our Pacific Coast business was handled in this manner about ten years ago with decidedly unsatisfactory results. The chief objection to this kind of an arrangement is that we are dependent almost wholly upon the activities of the manufacturers' agency to develop the business in any particular territory, and it frequently happens that such concerns are unable to do business with some of the biggest buyers, for personal or other reasons, and that the manufacturer is unable to get the business direct because of such agency arrangement. Furthermore, we are at present doing business with railroad companies, large gas engine manufacturers and jobbers on the Pacific Coast, some of whom buy through headquarters in the East, and the methods of handling the business are so complex that it is difficult to have the business handled by an agency in just the manner desired by us.

It would be necessary to allow a commission of from 5% to 7-1/2% on all sales made by such an agency, and, as our business on the Pacific Coast is rapidly approaching the \$100,000 mark, we could put a representative in the territory, representing us exclusively, at a smaller cost than if the business were handled through a manufacturers' agency and with much better results, as we would then be in direct control of our business and would not be so likely to lose our grasp on it as if it were handled through an outside concern. I believe further that the larger jobbers with whom we are doing business would prefer to deal with us direct, especially if we had a representative on the Coast, than to place their orders through an agency.

EEH/DB.

E.E. LUDSON.  
*EEH*

*Ludson*  
*Aylsworth*

Battery, St.

(Copies for Messrs. Wilson & Hudson)

Oct. 11th, 1910.

Messrs. Edison & Dyer:-

Herewith you will find Photographs of the New 5 & 7-Plate Pocket Type Battery, and also data relating to the same, including list of parts and the approximate manufacturing cost of assembled elements. A 5-plate cell of 400 A--H capacity consists of the following:

- No. 1. One Suspension Plate 1-7/16" x 1-5/8", soft cold rolled steel, copper-plated, with rigid riveted brass threaded stem in same.
- No. 2. Two Interchangeable Porcelain Separators.
- No. 3. One Iron Zinc-plate Suspension Bolt, 2-7/8" long, copper-plated and amalgamated.
- No. 4. Four Iron Nuts for No. 3, copper-plated and amalgamated.
- No. 5. One Copper Washer for No. 3, amalgamated.
- No. 6. One Connection Wire for No. 3 (size #11) copper, tinned, covered with rubber insulation, the latter being stripped from the ends, which are amalgamated.
- No. 7. Two Outside Zinc Plates, each with copper hanger, amalgamated, 270 grams zinc, net, each.
- No. 8. One Inside Zinc-plate with copper hanger, amalgamated, 400 grams zinc, net.
- No. 9. Two Oxide Pockets consisting of iron wire frame with end of stems threaded, bridge piece; the whole copper-plated with perforated sheet steel retainer; pressed in frame and ribbed; the same containing 350 grams of roasted copper scale, net, in each. Each pocket is treated by being dipped in caustic soda bath and baked.
- No. 10. Four Iron Nuts, copper-plated for No. 9, two for each pocket.
- No. 11. Four Thin Copper Washers for No. 9, two for each pocket.

The finished renewals, consisting of above parts assembled and ready for shipment, cost approximately, per 100, as follows:

	Cost of Material	Cost of Labor	Foremen & Inspection	Total
Zinc plates complete with separators, bolt, nuts, washer and wire, . . . . .	26.95½	2.46½	.23½	29.66
Pockets with frame, nuts and washers, loaded with oxide, pressed, ribbed, dipped and baked, . . . . .	23.86	4.62	.48	28.96
Suspension Plate & Bolt, . . . . .	1.34	.48	.05	1.87
Assembly, . . . . .		.50	.05	.55
Total, . . . . .	52.15½	8.06½	.81½	61.04

One 5-plate renewal thus costs approximately 61¢.  
In comparison a BSCC 400 A--H renewal assembled with suspension bolt costs 43¢.  
Both cases being without soda, oil, jar, cover, and suspension bolt nuts.

(Page #2)

A 7-plate cell of 600 A--H capacity consists of the following parts:

- No. 1. One Suspension Plate 1-7/16" x 2-11/16", soft cold rolled steel, copper-plated, with rigid riveted brass threaded stems in same.
- No. 2. Three Interchangeable Porcelain Separators.
- No. 3. One Iron Zinc Plate Suspension Bolt 3-31/32" long, copper-plated and amalgamated.
- No. 4. Five Iron Nuts for No. 3, copper-plated and amalgamated.
- No. 5. One Copper Washer for No. 3, amalgamated.
- No. 6. One Connection Wire for No. 3 (size #11), copper, tinned, covered with rubber insulation, the latter being stripped from the ends, which are amalgamated.
- No. 7. Two outside Zinc Plates each with copper hanger, amalgamated, 270 grams of zinc, net, each.
- No. 8. Two Inside Zinc Plates each with copper hanger, amalgamated, 400 grams of zinc, net, each.
- No. 9. Three Oxide Pockets consisting of iron wire frame with end of stems threaded, bridge piece; the whole copper-plated with perforated sheet steel retainer pressed in frame and ribbed; the same containing 350 grams of roasted copper scale, net, in each. Each pocket is treated by being dipped in caustic soda bath and baked.
- No. 10. Six Iron Nuts, copper-plated for No. 9, two for each pocket.
- No. 11. Six Thin Copper Washers for No. 9, two for each pocket.

The finished Renewals, consisting of above parts assembled and ready for shipment, cost approximately, per 100, as follows:

	Cost of Material	Cost of Labor	Foremen & Inspection	Total.
Zinc plates complete with separators, bolt, nuts, washer and wire, . . . . .	37.70	3.22	.31	41.23
Pockets with frame, nuts and washers, loaded with oxide, pressed, ribbed, dipped and baked, . . . . .	35.79	6.93	.72	43.44
Suspension Plate & Bolt, . . . . .	1.45	.54	.06	2.05
Assembly, / . . . . .	.75	.07		.82
Total, . . . . .	74.94	11.44	1.16	87.54

One 7-plate renewal thus costs approximately 87 1/2¢, the same being without soda, oil, jar, cover and suspension bolt nuts.

As the 400 A--H BSCO Battery is the largest size at present manufactured, there can be no comparison with this new 7-plate cell as regards cost.

Both the 5 and the 7-plate assembled elements are designed to be used in connection with present stock sizes of jars.

(Page #3)

The estimate outlined herein indicates that the new 400 A--H assembled elements cost approximately 17 cts. per cell more than the corresponding size of BSCO, considering labor, material and the same percentage for overhead expense.

In addition to the marked improvement of these new elements over the present BSCO, as far as mechanical construction and appearance are concerned, the following advantages of the new type were indicated in a report sent to Mr. Edison by Mr. W. H. Holland under date of 4/27/10.

#### MECHANICAL ADVANTAGES.

1. Oxides of the loaded type have great mechanical strength, so that the heavy losses due to breakage (both during manufacture and afterwards) will be entirely overcome.
2. This construction makes possible the building of oxides as thin and as large as is desired, and thus makes the multiple-plate design practicable.
3. The oxide plate, being practically integral with this support, precludes the possibility of bad contact between the plate and the support.
4. The rigid support of plates in the new design allows of spacing the plates closer together without danger of short circuit.

#### ELECTRICAL ADVANTAGES.

1. Uniformity. Oxides made in the new way, being machine loaded, will necessarily run very uniform in weight and dimensions, and therefore will have practically identical electrical characteristics. This is decidedly not the case with the present oxides; as the factors of weight, moisture, pressure, baking temperature and surface reduction all vary considerably, making a great difference in the quality and electrical working of the product.

Page #4.

2. Reliability. Great trouble is experienced with the present BSCC cell because of reoxidization of the copper layer at the surface of the oxide plate. This reoxidization occurs when oxides are kept in stock too long, and also in assembled cells when used infrequently or allowed to stand some time without use. It has been found by experiment that the loaded oxide plate absolutely eliminates this bad feature; the perforated container performs in a positive and reliable manner the functions of the copper surface layer, bringing the CuO in all parts of the plate into good metallic contact with the connecting support.

3. Experiment has shown that at constant temperature the capacity of a given volume of the caustic soda electrolyte, that is, the quantity of zinc which it will dissolve, depends upon the current rate per square inch of active zinc surface. In the 5-plate cell the active zinc surface is doubled, and in the 7-plate cell it is trebled. Therefore at the same discharge rate per cell the current per square inch of active zinc surface would be one-half regular in the 5-plate and one-third regular in the 7-plate. This makes it possible to realize much higher capacity in a given size cell.

4. With the same spacing of plates the internal resistance of the 5-plate cell would be about one-half and the 7-plate cell one-third of that of the regular type with plates of the same dimensions; but it is possible with the new construction to diminish the distance between plates to two-thirds of the present standard, thus decreasing the internal resistance by one-third more.

5. The working voltage of the multiple-plate cells will be much higher than the regular at the same discharge rate, on account of their lower internal resistance; or, to put it another way, these cells can be discharged at a new high rate and still maintain good

Page #5.

voltage. As voltage is the weak point of the Lalande type of cell, this increase is very desirable. It is large enough in amount to allow of replacing a 16-cell battery with 15 or perhaps 14 cells.

6. On a 4 ampere discharge of regular and multiple-plate cells all in "SS" jars with 4 liters of 20% NaOH each, the results compared as follows:-

Ampere Hours (to saturation of solution):

Regular	363 A - H	100%
5-plate	452 "	124.6%
7-plate	533 "	146.8

Average Voltage.

Regular	.518 V.	100%
5-plate	.570 "	110%
7-plate	.587 "	113.3%

Watt - Hours.

Regular	187	100%
5-plate	258	138%
7-plate	313	167.4%

Consideration of plant maintenance and losses in manufacturing, show to the advantage of the new type cell. For instance, the present method of manufacturing oxide plates for the BSCO requires a series of special ovens designed to withstand the high heat necessary to bake the plate (about 1570° F.) with a limited period of usefulness, necessitating the rebuilding of ovens at comparatively short periods. In addition a loss of plates running as high as 60% has been met with, the defect being in broken plates, buckled plates and a non-uniformity

Page #6.

in shrinkage. Also the consumption of fuel necessary to produce and maintain the high heat is an added expense.

In baking the new type pocket an ordinary japanning oven will be used requiring heat of from 250° to 300° F., unlimited life to the oven, and a period of approximately but four to five hours for the baking process. The dipping of the plates preparatory to baking requires but about 20 minutes; and as it is anticipated to place about 24 pockets in a crate, dip same and load 16 crates on a truck, which it is intended to wheel into the oven, a great saving in time can be made in thus pressing the oxide plates. In addition there will be no loss of plates as all plates loaded and baked will be assembled.

The following is a comparison between time required for 5 x 5 ESCO Oxide Plates and those of the new type, in which it is assumed that the grinding, mixing and pressings of the former about equal the loading and pressing of the latter and that the oven for handling each type occupies the same floor space.

BSCO.

Number of plates handled, 2400.	
Drying on steam table after pressing, . . . . .	20 Hrs.
Loading oven, . . . . .	5 "
Baking, 40 to 60 Hrs. Average, 50 "	
Cooling oven preparatory to unloading, . . . . .	24 "
Unloading, . . . . .	2 "
Soaking, Reducing, Burnishing and Drying, . . . . .	48
	<u>160 Hrs.</u>

No. of plates per hour, 16.

A loss of 50% in oven would further reduce the rate as the periods of loading, baking and cooling, also unloading, would be factors involved.

New Type.

Number of plates handled, 2400	
Period of soaking, dipping, loading on trucks, wheeling in and out of oven and cooling, . . . . .	2 Hrs.
Time in Oven, . . . . .	10 "
	<u>12 "</u>
Number of plates per hour, 200	

The condition of the new cell is such that orders for the necessary raw materials and machines and equipment for plant may be placed, also the

7.

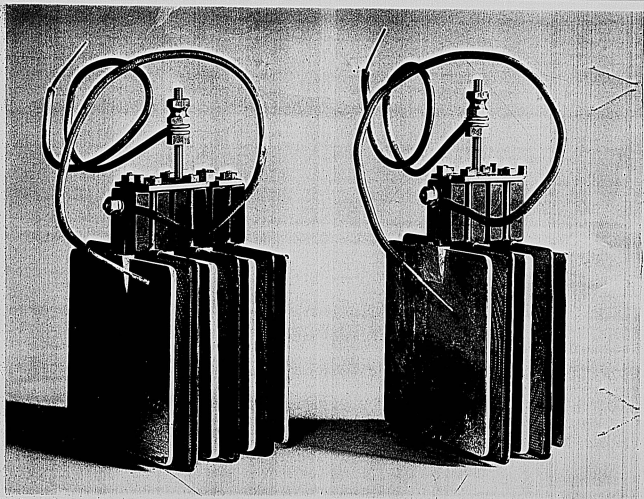
lay-out of plant prepared and the requisitions issued for making the special machines and handling appliances, etc., mentioned in memo. to Mr. Dyer, under date of Sept. 16th, if, in view of the cost, it is decided to start manufacturing the elements substantially as the photograph shows.

C. Schiff,

*W. H. Catman.*

ALS/TF

[ENCLOSURE (PHOTOCOPY)]



REFER TO THIS NUMBER  
IN YOUR REPLY

1629

499 MEMORANDUM

Battery, St.  
FRANK L. DYER  
ORANGE, N. J.

Mr. Holden:

12/21/10.

Referring to your memorandum of the 19th inst., I have gone over the proposed agreement with the Waterbury Battery Company and so far as I can see this agreement is correct. I presume you observed the point that the Waterbury people will have a license after November 1, 1913, but will not be bound to any amount for minimum royalties. Assuming that the agreement is approved by Mr. Hudson and yourself, please make the necessary arrangements to have it executed by Mr. Schoenmehl.

FLD/IWW

F. L. D.

# Edison Primary Batteries

Formerly known as  
EDISON-LALANDE

For Stationary and Portable Gas Engines,  
Slot Machines, Fan Motors, Railroad  
and Mine Signals, Phonographs, Sewing  
Machines, X-Ray Cables, Electro-  
Medical Use, Telephone, Fire and  
Burglar Alarm Systems, and all other  
classes of work.



Made by the  
EDISON MANUFACTURING COMPANY  
Orange, N. J.  
New York Chicago London

[ON BACK OF PRECEDING PAGE]



#### **1910. Battery - Storage - General (D-10-05)**

This folder contains correspondence and other documents relating to the commercial and technical development of Edison's alkaline storage battery. Among the documents for 1910 are numerous items in Edison's hand, including a 20-page draft letter to Samuel Insull urging him to promote the battery among "our central station people" and a memorandum regarding the proposed guarantee on his battery. There are also documents pertaining to the manufacture of batteries and the finances of the Edison Storage Battery Co., along with letters concerning the use of the battery in submarines, buses, streetcars, railroads, and other applications. Some of the letters refer to the proposed use of the battery with the Klaxon automobile horn invented by Miller Reese Hutchison. Also included are numerous unsolicited requests for information about the battery, some with marginal notes by Edison. A sample of these letters has been selected. At the end of the folder is an undated typescript containing "instructions for the proper care of Edison storage batteries" and comparing the Edison battery to the Exide battery manufactured by the Electric Storage Battery Co. Among the correspondents are Frank L. Dyer, vice president and general counsel of the Edison Storage Battery Co.; William G. Bee, sales manager; and business associates Ralph H. Beach, Cornelius J. Field, Miller Reese Hutchison, Samuel Insull, Frank J. Sprague, and Walter E. Holland.

Approximately 50 percent of the documents have been selected. The items not selected include letters and memoranda regarding company board meetings, purchasing, and inventory; reports on the use of lead batteries in submarines and streetcars; unsolicited requests; letters of transmittal; and items that duplicate information in selected material.

But articles by <sup>James</sup> ~~James~~ <sup>James</sup> say that I ~~embrace~~ <sup>embrace</sup> <sup>them</sup> <sup>they</sup> are working on an ~~anti-communist~~ <sup>anti-communist</sup> gang plow + expect they will get something cheap. <sup>Diamond Springs Va.</sup> Jan. 11, 1910

Mr. Thos. A. Edison

Dear Sir,

The burden of plowing the soil, is so terrible that I beg of you to attach some motor to a gang plow, and help the millions of sufferers and increase the food supply. There were gangs shown at the Exposition that cut about six feet wide but the agent said we must use three and an engine, so

the first cost would be \$3000.  
Then an engineer would be needed  
and the average farmer can not  
afford that. Now the power  
you handle so well, attached  
to a single gang, could perhaps  
be used by intelligent farmers,  
and would be of incalculable  
benefit. Pardon my presumption  
but I have groaned and prayed  
over this for years. We have  
riding plows. But we need  
gangs that run like an auto-  
mobile, one in a field, not  
the great complication of machinery  
used on the immense tracts in  
California. The enclosed clippings  
gave me hope. I know you could

do this if you thought it worth  
while, not on my account at  
all, but to help the many young  
men who lose hope as the labor  
question gets more difficult.  
I expect no answer, my  
personality is nothing. But I  
do beseech you to consider the  
idea.

Very respectfully  
E. C. Hodgman

[ENCLOSURE]

By J. H. Adams.

**I** HAVE found the metal," said Thomas A. Edison, "and the problem has been solved."

The great inventor was speaking to me of his wonderful new battery which is destined to revolutionize transit facilities and drive horses off the streets of all large cities.

Running the gamut of the high fence about the laboratory, the guard at the wicket gate and the numerous sentinels in the form of workmen who are always on guard to keep the intruder from encroaching on the time of the busiest inventor in the world, the writer bearded the lion in his den up on the second floor of the great laboratory at West Orange, N. J., and after persuading him that the world was anxious to learn of his latest discoveries, especially in the line of storage batteries and cement, Mr. Edison talked with great freedom.

"Singularly enough," said Mr. Edison, speaking of the battery, "after years of study and hard labor, to say nothing of the enormous expense, it all came out right one day and now it is an accomplished fact. I have found the metal that solves the problem."

Mr. Edison was speaking of his new cobalt process, which has produced a metallic compound that revolutionizes the making of electric storage batteries. It was to find the necessary cobalt that Mr. Edison made his recent extensive journeys, especially in the South.

#### Water Does the Trick.

In the Edison battery the active materials are oxides of nickel and of iron respectively in the positive and negative electrodes; the electrolyte—the liquid in which the electrodes are immersed—being a solution of caustic potash in water. The retaining cans are of sheet steel electro-plated with nickel, fused so that they are practically one metal. The battery is practically unlimited in its life. As only the water in the potash solution evaporates, no other water need be added to keep the electrolyte in the right condition. There are no acid fumes to destroy the iron work of a truck or wagon and eat it away, as in the old style batteries where sulphuric acid is used. The Edison battery weighs about half as much as a lead-battery for the same output, and, in addition to this, it will save about fifty per cent. of its weight in the construction of the truck itself. The battery cannot be injured by overcharging, does not deteriorate when left discharged, does not require access to each cell, makes no noise, can be removed, and gives output or mileage of a lead-battery of the same weight.

[ENCLOSURE]

*To the Secretary*

*Please do not throw  
this in the waste basket! I  
hope I am not a crank. it is  
a mothers duty for her own  
and her neighbors sake that  
compels me to write*

*E. C. Hodgman*

Battery car - 1910

Pennsylvania Packet, 1771: Daily Advertiser, 1784  
United States Gazette, 1789: The oldest Daily  
Newspaper in America Philadelphia

January twenty-first  
1910.

Mr. Thos. A. Edison  
West Orange  
New Jersey.

Dear Sir:

We believe you will be interested in the attached clipping which appeared in our issue of January the twenty-first.

Please accept same with our compliments.

Yours very truly,

THE NORTH AMERICAN

Advertising Manager.



K

## STORAGE-BATTERY CAR HAS SUCCESSFUL TEST

Edison Predicts It Will Supersede  
Trolley System Entirely.

RUN 20 MILES AN HOUR

Special Dispatch to The North American.

WEST ORANGE, N. J., Jan. 20.  
Tests were made today of Thomas A. Edison's storage battery car on the tracks of the Public Service Company. Among the interested observers were a number of men of the Public Service trolley system, and they agreed with Edison that he has made great strides toward the perfection of a street car that can be run cheaply and practically without the use of current wires.

When the first tests were made Edison was not present, so confident was he that he would get a favorable report from the men who ran the car. He told them to go ahead, and he would not leave his work in the laboratory. Later, however, he visited the scene of the experiment and took a ride in the car.

As he rode over the stretch of track Edison was looking out of the car window. He saw two youngsters pointing to the car and talking to a trolley pole. Edison smiled, and turning to the men who sat at his side, said: "When you were a kid like those your eyes were just as big when you saw your first car going along the street without horses. These youngsters will live to see the day when there will be no current line and no tracks of street railways."

The car attained a maximum speed of twenty miles an hour, and responded in every way to the tests put upon it. The experimental car is twenty-six feet long and seven feet six inches wide. It is equipped with two 7½-horsepower motors, and clung to the full capacity of the batteries it will run 100 miles without a renewal of the charge. Edison's car weighs five tons, or half of that of the ordinary trolley car. The cost of equipping the new car is estimated by Edison to be 1 cent a mile.

C. J. FIELD  
10 FIFTH AVENUE  
EDISON BUILDING  
NEW YORK

TELEPHONE  
GRAMERCY 1352

New York, Jan. 21, 1910.

Mr. Thomas A. Edison,  
Orange, N.J.

My dear Mr. Edison: In accordance with my understanding with you on the building of electric omnibuses to operate with your storage batteries I have about completed the organization of my syndicate to back me in the matter. We are going to push the building of the first demonstrating bus and hope to have it ready for your inspection and test by the first part of May.

I have found it necessary, in order to satisfy the interests, to incorporate a small company which we propose to call the "Electric Omnibus and Truck Company" ~~unless you were willing to let us call it the "Edison Electric Omnibus Company".~~

Awaiting your favor and approval of these matters I am

Yours respectfully,

C. J. Field.

C. J. FIELD  
10 FIFTH AVENUE  
EDISON BUILDING  
NEW YORK

TELEPHONE  
GRAMERCY 1352

New York, Jan. 21, 1910.

Mr. Thomas A. Edison,  
Orange, N.J.

My dear Mr. Edison: In reference to the bus motors I understand from Mr. Beach that you propose later to take up the building of the motors for the cars and busses for us.

In the mean time I assume that I will have to purchase G.E. or other similar motors for our first bus.

The size motors I have settled on have a normal capacity of 30 Amperes and 75 Volts at 730 R.P.M., with 200% overload capacity for a half hour. This is the size and type on the plan I last presented with two motors for a bus with direct drive by single chain to each wheel.

Yours respectfully,

C. J. Field

100 Broadway 17th floor.

July 22, 1910.

To  
the Thomas A. Edison Laboratory  
Valley Road W.O.

Holland  
Make figures  
of 1288  
Aug 1/10

Sirs,

At present occupied with calculations for electrification of steam-railroads, I would be very pleased to receive information regarding a battery of capacity enough to start a service indicated in enclosed sketch.

I assume the locomotive propelled by DC motors has a 1200 volt and the battery operated with contactors.

The points regarding which I would be glad to have information are,

weight of battery,  
 principal dimensions,  
 efficiency,  
 Cost erected in locomotive or Tender,  
 Capacity in Maximum momentary kw,  
 " one hour maximum kw,  
 " 10 min " "  
 " 6 hours " "  
 " 12 hours " "

Number of round trips possible before  
 recharge of battery is necessary.

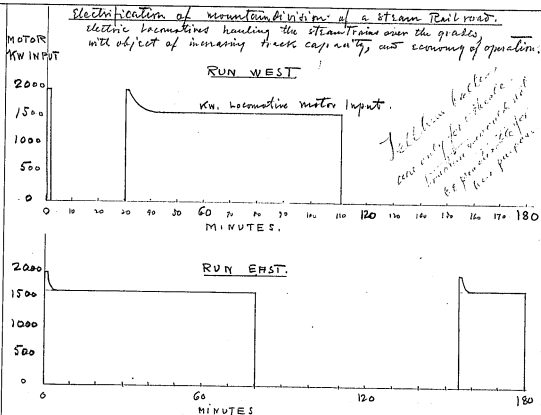
Time required for charging the battery.

Capacity of Powerplant necessary to  
 charge the battery of one locomotive.

If you have time enough  
 to spare for answering these questions  
 I would feel greatly obliged indeed,

Yours very truly  
 C. G. Bergman.

[ATTACHMENT]



These Two Diagrams represent together a round trip of the electric locomotive, pulling a heavy freight train over steep grades.

Assume Powerhouse for charging the batteries <sup>located</sup> at one end of the line.

Jan. 24, 1910.

Mr. E. H. Bosch,  
10 Fifth Ave.,  
New York City.

Dear Mr. Bosch:

I hand you herewith letter from Mr. William J. Rich, the Examiner in the Patent Office who has charge of the Storage Batteries, and who has acted on almost all of our Battery Applications. He has always been thoroughly interested in the Edison Batteries, and I wish therefore, if you have any reports or printed matter that I could send him relating to your experiment you will let me have them, and I will forward them to him.

Of course I do not mean anything personal or confidential in character, but anything that you would be satisfied to have the general public know. I think it always well to cultivate friendly relations with the Patent Office Officials.

Yours very truly,

Vice President.

FLD/MLI  
1 enc.

Battery St.

1257

Jan. 24, 1910.

Mr. William J. Rich,  
Room 175, Patent Office,  
Washington, D. C.

My dear Mr. Rich:

Your favor of the 22nd inst. has been received. I have not kept very close track of the experiments which have been made in installing Edison Batteries in street cars, and I only know very generally what these experiments are.

I understand however, that Mr. Edison has been able to construct a street car of such great lightness, that when equipped with a full supply of Edison Batteries, the entire outfit weighs only about one half as much as an ordinary motor car. And this is done without a sacrifice of strength and durability. A number of Railroad Companies have shown a great deal of interest in this enterprise, and the entire proposition seems to be one that appeals very strongly to them.

I have referred your letter to Mr. Beach who has charge of these experiments, and have asked him to let me have any reports or publications relating to the

Page 2,  
Mr. William J. Rich,  
Jan. 24, 1910.

some, and if he does so, I will send them down to  
you. I will give Mr. Edison your good wishes, which  
I know he will appreciate.

Yours very truly,

Vice President.

MH

New York , Jan., 28, 1910

COPY.

Mr. JOHN OTTENHEIMER,

Caldwell, N. J.

My DEar Sir:

Mr. Edson has referred to me for attention the clipping sent him in reference to your proposed Omnibusses around Caldwell.

The writer is in charge of the building of busses operated with the Edson battery for the service you require and I would be pleased to take the matter up with you. I could meet you at my office by appointment or go out to Caldwell and meet you and your people with the plans of our busses.

We have just what you want . Capacity 25 to 29 passengers, & pay as you enter so the motorman can operate it.

You have a splnted district there to operate from & good route & I would be pleased to take the matter up with you at your early convenience

Yours very truly,

(signed) C. J. Field.



# The Edison Portland Cement Co.

THOMAS A. EDISON, CHAIRMAN OF BOARD  
 HENRY H. CHICHESTER, PRESIDENT  
 W. R. MALLORY, VICE-PRESIDENT  
 WILLIAM F. EDDY, SECRETARY  
 H. F. MILLER, TREASURER

Telegraph, Freight and Passenger Station, NEW VILLAGE, N. J.

P. O. ADDRESS, STEWARTSVILLE, N. J.

SALES OFFICES:  
 PHILADELPHIA, Pa., Arcade Building  
 NEW YORK, N. Y., St. James Building  
 PITTSBURGH, Pa., Mechanics Building  
 PHOENIX, N. J., Union Building  
 BOSTON, MASS., Post Office Square Bldg  
 BATAVIA, N. Y., National Bank Building

February 4, 1910.

## PERSONAL

Mr. Frank L. Dyer,  
 Edison Laboratory,  
 Orange, N. J.

My dear Mr. Dyer:-

I beg herewith to enclose a letter from  
 Mr. Willard P. Reid, which I would ask you to note and  
 return to me, and to keep the contents confidential. If  
 Mr. Field is the same one to whom Mr. Reid refers, it would  
 be wise for you to have the information.

Kindly return the <sup>letter</sup> information as soon as  
 you have finished with it.

Yours very truly,

WEM-RBS

ENCLOSURE:-

*Use letter 'Red-ear' - Wm. Allen  
 fundamentally with  
 Shuman seen Beach  
 Don't know this to  
 any one -  
 A. J. G.*



C. J. FIELD  
10 FIFTH AVENUE  
EDISON BUILDING  
NEW YORK

TELEPHONE  
GRAMERCY 1352

New York, 2/11/10.

Mr. F. L. Dyer

My dear Sir:

Your favor of the 7th & #1285

addressed to Mr. Beach has been referred to the writer to ans.  
I enclose you copy of letter sent to Mr. John Oppenheimer of  
Caldwell, H. J. 1<sup>st</sup> references to Busses not cars.

The matter had been referred to me  
by Mr. Edison, as you probably know that I am designing an Om  
nibus to operate with the Edison Battery & then going ahead to  
manufacture them the same as Beach is on the Cars. Mr. Beach  
& I are working in harmony on those matters.

I have been working on the mat  
ter for about 3 months & submitting the plans to Mr. Edison  
from time to time & saw him last just before he left for the  
south.

My full name is Cornelius J. Field,  
I have lived in Brooklyn for a number of years & have been  
connected with the old Edison interests as Chief Eng. of the  
Edison United Mfg. Co. then as Mgr. of the Bklyn Edison Co.  
&c. The Caldwell people put the article in question in  
the Times, I have been very carefull as to what I have said  
on these matters. We are proposing to put the matter into  
a small Co. with the approval of Mr. Edison.

I will go out monday & see you  
on this & the matter of room here on which I had  
an understanding with Mr. Edison  
of Beach. Yours truly C. J. Field

Enclosure  
copy letter  
F

~~Small~~ ~~copy - 1210 - hand us~~  
~~OP.~~ ~~[scribbles]~~ ~~the [unclear]~~

The work ~~[scribbles]~~ ~~the [unclear]~~  
~~[scribbles]~~ ~~[scribbles]~~ ~~[scribbles]~~

24th

Wrote 2/12

Postmaster General at Washington  
get her initials & address  
4 send him a copy  
Catalogue with a letter  
thus

My Dear Dr. Crain This will  
show you what I have  
been doing since I saw you  
at the Club - perhaps there  
is something in it that  
could be made useful in  
your ~~new~~ line of sorrow  
Yours truly  
J. A. C. M.

5th Ave & 23rd St. Write you  
Sincerely

Recalcitrant

Also send <sup>Bulley</sup> ~~me~~ to Frank.

Munsey publisher 9

Scuy

I read your description of the dataset Electrical baby. The next time its to 6z Twins

*[Handwritten signature]*

Encl. 1000000

Pen III -

This party in question engaged in an auto-stage venture in Brooklyn with two other men, who appear to be men of affairs.

One of these men condemns him by refusing to speak of him and showing repressed excitement in the refusal.


The other without hesitation and in the strongest language classes him as a thief, and utterly unreliable and unworthy of confidence, and states that such is his reputation with all who have had business dealings with him.

As these two men from whom I sought a reference lost \$300,000. between them in the auto-stage venture, they may be biased in their opinion.

Blanche Churchill.

Feb. 15<sup>th</sup>/10.

[ATTACHMENT: R.G. DUN & CO. TO  
EDISON MANUFACTURING CO.]

 Please note 1. NAME, BUSINESS and ADDRESS correspond with your inquiry.

RV. (See R Y)

CORNELIUS J. FINK-----BROOKLYN, N.Y.

198 February 25th, 1910...Formerly 1294 Dean St.  
He resided at the above address but the house is at present vacant  
and is "To-Let." He is aged about forty-seven and has been identi-  
fied with various enterprises for several years past and apparently  
has not been successful in accumulating means. He was at one time  
of the Field Engineering Co., at 143 Liberty St., New York City and  
was supposed to have owned the bulk of the stock of that corporation  
which failed. From time to time he allowed judgments to be entered  
against him. In the early part of 1902 he became President & Treas-  
urer of the General Motor Car Co., at 239 West 50th St., New York  
City, a New York State corporation capitalized at \$10,000. That con-  
cern did a storage and repair business and also acted as selling  
agents. In July 1902 he claimed that that company had a paid in  
capital of \$10,000 but declined further details. He was at one  
time connected with the De Dion Bouton Motorette Co., of Brooklyn for  
several years. He is a mechanical engineer by profession and some  
years ago had an office at 39 Courtlandt St. On October 18th, 1902  
he filed a voluntary petition in bankruptcy, the schedule showing  
liabilities of \$30,189 and assets of \$2,492. He received his dis-  
charge on December 5th, 1902. At this time nothing whatever is  
learned regarding him or his affairs or where he is at present lo-  
cated and he is thought to have but little if any financial responsi-  
bility.

(N Q)

3700

C.L.P.

[ATTACHMENT: BRADSTREET CO. TO  
EDISON MANUFACTURING CO.]

4--3-2-10--Con.

FIELD CORNELIUS J. -

Age about 47; married.

- BROOKLYN, N.Y.  
Formerly resided--1294  
Dean St.

He is a mechanical engineer and was originally in the employ of the Edison Electric Illuminating Co. of Brooklyn, N.Y., severing his connection there in 1889. He has since been interested in numerous ventures individually and with others, but does not appear to have met with any success to speak of and on a number of occasions has been made a judgment debtor. He formerly resided at this address, his wife being the reputed owner of the property, but she recently sold it and the family moved away about a month ago, the only address he leaving in the neighborhood was a business one, of the Edison Mfg. Co. at 10-5th Avenue, New York City, Manhattan. He is said quite capable in his line, but represents no attachable responsibility and the more conservative authorities would encourage him to buy for cash.

8-35- - - - Let - - - - March 2, 1910.

THOMAS A. EDISON  
President

FRANK L. DYER  
Vice-President and General Counsel

E. G. DODGE  
General Manager

H. F. MILLER  
Secretary-Treasurer

## EDISON STORAGE BATTERY CO.

Telephone, 503 (New York)

Confidential

Mr. Thomas A. Edison,  
Fort Myers, Florida.

Dear Mr. Edison:

You know, of course, that a man named Cornelius J. Field is doing some work apparently under the direction and in co-operation with Mr. Beach in the development of omnibuses for use with the Edison battery. He is located at present at the New York Office. The enclosed letter from Mr. Reid, dated February 2nd, to Mr. Mallory was sent me with the newspaper clipping referred to, and upon receiving it I immediately did what I could to investigate the matter. You will see that Mr. Reid does not have a very high opinion of Field's honesty and ability.

Upon receiving this letter I immediately wrote Mr. Beach and asked him if the Field in question was the Cornelius J. Field that Mr. Reid speaks of, and I enclose Mr. Field's letter to me of February 11th in which he speaks about himself.

I also have had a man attempt to interview the man to whom Mr. Reid refers, and he found that ex-Surrogate Church would not talk on the subject and that Mr. Packard was away from town. Mr. Cochen, however, without hesitation and in strong language referred to Field as a thief and utterly unreliable and unworthy of confidence, and states that such is his reputation with all who have had business dealings with him. This, however,

ORANGE, NEW JERSEY March 8, 1910.

*I have made no promises of any kind to Field - warn him to drop use of my name, and to use the office as I never took any stock in him*

*that a man named Cornelius J. Field is doing some work apparently under the direction and in co-operation with Mr. Beach in the development of omnibuses for use with the Edison battery. He is located at present at the New York Office.*

*Wacker - Re Reid, Confidential, etc.*

*1328 Dyer*

*Passer, St*

T. A. Edison.

(2)

3/8/10.

may be a very biased opinion, because I find that the three men to whom Mr. Reid refers lost about \$300,000 in an Auto-Stage venture that Field got them into.

I have also had commercial reports obtained, which I enclose, and which are not very favorable.

To-day while in the New York office I find that Field is receiving mail addressed "Edison Electric Omnibus & Cab Co." and that he is having stock printed for a corporation called "The Electric Omnibus & Truck Co." with \$100,000 capital.

It looks to me as if this man might be a source of trouble to you in the future. I certainly think that it would be most unwise to allow him to go ahead and organize a corporation with its headquarters at our office in New York and with his apparently close association with you as a ready means of disposing of the stock. Personally I do not think that you should continue to have him go ahead with the work because a man of this reputation cannot be a desirable person to associate with the Edison battery.

From what I can hear about Beach he is none too reliable, but this other man I think is a very dangerous person to have around, at least so closely associated with us. I feel that as sure as fate he will be using your name to exploit his schemes, if he is not already doing so.

If you agree with me I will have a talk with him and tell him that we consider it undesirable that he should be located at our New York Office and that he must get an office somewhere else, and I will impress upon him the absolute importance of standing on his own bottom so far as his work is concerned and that he can only announce that the only relation he has to

T. A. Edison.

(3)

3/8/10.

you is as a possible purchaser of Edison batteries when his  
has is fully developed.

I think this would be a very moderate way to treat the  
situation. I do not like to say anything further, because I do  
not know how fully you looked into the matter before taking Mr.  
Field on.

Yours very truly,

FLD/177  
Enc-

*Frank L. Ryan*

THOMAS A. EDISON  
*President*

FRANK L. DYER  
*Vice-President and General Counsel*

E. G. DODGE  
*General Manager*

H. F. MILLER  
*Secretary-Treasurer*

## EDISON STORAGE BATTERY CO.

Telephone, 908 Orange

Please refer to
File No. ....

ORANGE, NEW JERSEY March eleven  
1 9 1 0

Mr. F. L. Dyer:

I hand you herewith your letter of the 28th ult., addressed to Mr. Edison, and have carefully noted his comments. I understand perfectly what Mr. Edison wants, and we are doing all we can to produce flake as he desires it. I feel satisfied that there is a slight improvement in each lot that we get out. The loading weight on the last two lots of flake has been corrected; lot 31 was 4.2 and lot 32 was 4.3. I would state that the last report from Holland shows that the tubes are higher than they have been during my time.

*W. L. Miller* *E. G. Dodge*

[ENCLOSURE]

THOMAS A. EDISON  
President

*Battery, Storage*  
FRANK L. DYER  
Vice-President and General Counsel

E. G. DODGE  
General Manager

H. F. MILLER  
Secretary-Treasurer

## EDISON STORAGE BATTERY CO.

*56*  
Telephone, 932 Orange

ORANGE, NEW JERSEY Feb. 20, 1916.

Mr. Thomas A. Edison

Fort Myers, Florida.

Dear Mr. Edison:

*It is not flat flake exactly  
but flake that is not turned  
over or all broken up  
that I expect to — the flake can  
curl up but not turn over*

Your memorandum on the subject of flat flake in the battery was duly received, but at the time Holland was away from the Laboratory for a couple of days over Washington's Birthday and in some way or other the matter was overlooked. I have taken up this question with Holland and beg to enclose his report, from which it would appear that the situation is not as bad as you feared and that so far as he can tell the flake is coming as flat as can be expected.

I also have taken up the matter with Mr. Dodge, and he has shown me his report to you of the 18th inst. with your endorsements thereon. This report was evidently received by you after you wrote me, and since you do not say anything regarding the flake, I assume that you are not so uneasy over the situation. Mr. Dodge tells me that he is doing all that he can to get the flakes as flat as possible and that there is absolutely no intention on his part to omit doing anything that you have instructed him to do. He says that in some of the cells on which you have received reports the poor showing is probably due to another cause, which he will write you about fully immediately.

FED/IWW

Yours very truly,

*Frank L. Dyer*

[ENCLOSURE]

Feb. 28, 1910.

Mrs. Dyer:

It seems to be a fact as Mrs. Edison says, that storage cells containing flat flake in the nickel plates give much better results than ones having curly flake. The figures he gave you on small cells showing this are borne out by results on "A4" cells, as I will show you.

In the factory last Fall they were making the regular flake thicker than at present, which made it very curly, - and the capacity of cells at that time was very low. They then decreased the thickness of flake and made it more nearly flat, thus effecting a marked improvement in capacity. Since then they have been working continually toward flatter flake, with the result that the capacity has gradually improved until now it is better than ever before.

As instances: "A4" cells #3011-13 made in September '09 and having

[ENCLOSURE]

(2)

thick curly flake, had an average overcharge capacity of 162 ampere-hours when new. The latest cells we have tested - #10802-03 - made in January '10, had an average capacity of 181 ampere-hours under the same conditions.

Mr. Dodge says the flakes in these last cells was fairly flat but not altogether so; and while doing everything in his power to improve it still further, he doubts whether it is possible to make absolutely flat flakes.

Yours respectfully,

Walter E. Holland  
Edison Laboratory.

1328

March 25, 1910.

Mr. Cornelius F. Field,  
10 Fifth Ave.,

New York City.

My dear Sir:

I am advised by Mr. Edison that he would prefer to have you establish your office somewhere else than at No. 10 Fifth Ave., because he is afraid that if you continue to be located there the exact relation which exists between you and him will not be understood by the public, particularly as I understand you expect to form a company for the exploitation of your electric buses. As I understand it, the only relation between you and Mr. Edison as to the extent that if the bus is developed by you and proves to be a commercial success we are to furnish you with storage batteries for operating the same. Your being at No. 10 Fifth Ave. might lead the public to suppose that Mr. Edison had some closer connection to your enterprise than this. It is very important that his position should not be misinterpreted and I think therefore that it would be very much better if you moved your office to some other place. Of course such a change would not in any way affect the arrangement which Mr. Edison has with you. I have no desire to be unduly pressing in the matter, but I would like to have you arrange to move not later than April 15th next.

Yours very truly,

FLD/IWW

Vice-President.

Ed - Hand

Write 3/28/10

Harry Miller -

Say to C. J. Field

10<sup>th</sup> Ave NE

Four blue pencils received

Their examination reveals the fact

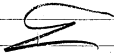
that you have not understood  
anything of the various details  
I explained to you not once  
but several times, therefore  
it is useless <sup>the matter</sup> for me to go any  
further in <sup>the matter</sup> it.

TOE

1003

Harry  
Show Letter to Field to  
Over-~~and~~ this -

Field is a man of  
helpless mediocrity, after explaining  
what Experience had taught was  
necessary he made a set of  
drawings in which he left  
out every suggestion, ~~and~~  
I then went into fuller  
explanations as to why it was  
necessary to do certain  
things - Again he brought  
me the drawings, only one  
of several changes were made  
Again explained, Now he sends  
me drawings down here  
without any of the things  
changed - He either is daffy in  
the head or a fool in Over

any Event, I do not want  
anything more to do  
with him & he should  
get out of our place  
in 9th Ave  


THOMAS A. EDISON  
President

FRANK L. DYER  
Vice-President and General Counsel

E. G. DODGE  
General Manager

H. F. MILLER  
Secretary-Treasurer

## EDISON STORAGE BATTERY CO.

Telephone, 928 Orange

*Dyer*  
ORANGE, NEW JERSEY March 30, 1910.

Mr. Thomas A. Edison,  
Fort Myers, Florida.

Dear Mr. Edison:

*It may take him a year to  
get rid of him - Has some  
will not be a success*

In accordance with your request I wrote Mr. Field asking him to give up his quarters at the New York office not later than April 15th. He came in to-day and told me that the only people who were interested with him in his scheme who owned stock in his company were his father, his brother and two or three personal friends. He said that they had no intention to attempt to sell stock until the bus had been fully tried out. He said it was a very great convenience for him to be located near Mr. Beach because he was able to exchange ideas with Beach and they had an understanding between themselves under which Beach could use Field's ideas on cars and Field could use Beach's ideas on buses. He also said that his letter paper and stationery was all printed with the address on it and that it would be some expense to move. His final request was that he be allowed to stay at No. 10 Fifth Ave. until the first bus was completed, which he said would not be later than the end of May.

He seemed to have some inkling of what the trouble was because he said that under no circumstances had he attempted to take advantage of your name and had always been most careful to explain his exact relations to any prospective purchaser.

Are you willing that he should stay until the end of

T. A. Edison.

(2)

3/30/10.

May, or shall I insist that he should leave by April 15th?

I am not supposed to know why you wanted him to go,  
so that I told him I would put the matter up to you.

Yours very truly,

*Frank L. Rice*

FLD/IWW

*Automobile*

1328

March 31, 1910.

Mr. Cornelius J. Field,  
10 Fifth Ave.,

New York.

My dear Sir:

We have just received a letter to-day from the Diehl Manufacturing Co., of Elizabethport, making inquiries concerning the Electric Omnibus & Truck Co., in which they say:

"We are under the impression that the Company is good, being backed up and understood by Mr. Edison."

This is exactly the situation that I feared and which I presume Mr. Edison also possibly anticipated. The fact that you are located at No. 10 Fifth Ave. would naturally lead people to suppose that Mr. Edison in some way had ~~the~~ direct connection with you. I understood from you yesterday that you were always careful in telling everyone exactly what your connection with Mr. Edison was, but you can see that in this case the wrong impression has been created. I do not think it is fair to Mr. Edison that this situation should continue, and acting on my own responsibility I must insist that you should make arrangements for leaving our office not later than April 15th. Of course you understand that I have no personal feeling whatever in this matter, but am only actuated by a desire to protect Mr. Edison's interests as far as possible.

Yours very truly,

C. J. FIELD  
10 FIFTH AVENUE  
EDISON BUILDING  
NEW YORK

TELEPHONE  
GRAMSCY 133

Dyer

New York, 3/31/10

I shall not answer this  
E

Mr. Thomas A. Edison,

Fort Mayer, Fla.

My dear Mr. Edison:

Mr. Dyer has notified me of your wish for me to change my office from 10 Fifth Ave. I went out & talked the matter over with him & he said he would write you & for me to do the same.

I want to appeal to your fairness to let me stay here till I complete the first Bus & try it out, which will not be later than the early part of June.

In reference to putting the Bus business into a Co. I have only done so in a small way, in order to protect the interests of those who are backing me up in the matter & privately. The ones in the matter with me are my father C. R. Field a retired Real Estate operator; my brother, F. H. Field a cooperation lawyer & 2 personal friends one of whom I introduced you too

We are not offering the stock outside for sale nor do we propose to till ~~are~~ developing a successful Bus & then only privately.

We are running matters on a strictly business basis. Our work is all being done for us in outside shops & our assembling also so as not bother your works at all. Every thing is being ~~xxxxx~~ ordered in our memo. There is no connecting you with it in any way, except in so far as furnishing the batteries.

Bosch's Car business is in a Co. similar to mine. We are working together on business & engineering matters & it is a great advantage I think to us & the Battery interests to have our location at the same place.

I have an opportunity of making a good future for myself & also a large user for the Edison Battery & all I ask is an opportunity to make good on this first car & then move my business to the works where I am building them. It can make no serious difference, as I see, to postpone action till I complete & try out the first Bus in June, when I am sure it will prove satisfactory to you. Awaiting your further commands, I am,

Yours respectfully,

C. J. Field

OK

R. H. BEACH  
10 FIFTH AVE. TEL. 1382 GRAMERCY  
NEW YORK

BEACH STORAGE BATTERY CARS  
(USING EDISON STORAGE BATTERIES)

April 1, 1910.

Mr F.L.Dyer,

Vice-President, Edison Storage Battery Company,

ORANGE, N.J.

My dear Dyer:

I have been thinking over the possibility of a guarantee which the Battery Company could make to its customers. Of course I am aware of the fact that Mr Edison objects to making any guarantee at all, and I guess it is a safe proposition to say that all guarantees are bad; perhaps I might go so far as to say that they are the fruitful soil in which principally dissension and heart-ache thrive.

However, it is a custom in the storage battery business to make some sort of a guarantee; in fact it is a custom of the electrical business in general, and I might go further and state that it is the practice in all machinery manufacturing trades to make some kind of a guarantee of life and performance.

I enclose herewith a suggestion as to the form of guarantee which it appears to me as though The Edison Storage Battery Company would be perfectly justified in making, and unless I have made some mistake in the technical wording of this, it does not obligate the Company to anything. You will notice that I have qualified the form of guarantee to the effect that the owner of the battery must follow the instructions as prescribed; this means that he must follow these instructions absolutely; also that he must show to the satisfaction of the Company that these instructions have been followed. Now, of course, he will not follow these instructions, and it will

PID-2.

furthermore be absolutely impossible for the owner to be able to show or prove that he had followed the instructions, even if he had, but I am inclined to think that if we could have this guarantee printed and accompany every set of battery, it would entirely eliminate that awful difficulty under which the salesman now labors.

I don't want you to think that I am "butting in" or offering any "gratuitous advice" in this matter, but I constantly meet this difficulty, and while it is possible to sell batteries and cars without a guarantee, yet the customer does feel "that he ought to have something".

I have no doubt but that if the Works sell a battery and it should fail to perform every possible effort would be made to do the square thing, whether there was any guarantee or not, but that is not the point that I am considering now. The point is that the Company operating a lot of vehicles or a lot of cars, particularly the General Managers or Purchasing Agents, must have at least something that has the excuse of a guarantee, in order to satisfy their board of directors, President, Stockholders or superior in authority as to whether they have exercised due diligence and scrutiny in giving their purchase the usual and proper business care.

I am not much of a lawyer, but this "thing" which I enclose I am inclined to think would do the business. It is very much like the life insurance policies. Ordinarily the average person cannot tell what their policies mean. I suppose very few lawyers would be able to tell the true meaning of a life insurance policy, and I suppose as a matter of fact the policies do not mean much of anything, except that they satisfy the man that wants to be insured, and somebody usually gets the money when he dies; that was the idea I had in mind in sketching out the form for guarantee herewith. I did not intend that it should mean any-

FID-3.

thing, except that it relieves the seller of the battery from that very unpleasant position of saying that he simply cannot guarantee his own product.

Yours very truly,

(Encls)

W. H. R. R. R.

The.....cells of Edison Storage Battery.....type  
sold to.....  
of.....  
on.....190\_\_bearing the number.....  
and hereby guaranteed against all defects of workmanship and material,  
and are furthermore guaranteed to receive and discharge current to  
their normal rated capacity, which is....., during a period  
of three (3) years from the date hereof, provided the printed instructions which accompany the battery, and copy of which is attached hereto, are fulfilled. Should the battery herein described fail to perform, as herein guaranteed to perform, during the period above named, and the buyer shows to our satisfaction that these instructions have been complied with, this Company hereby agrees to replace the batteries herein described with new batteries of the same type and specifications as are herein set forth.

Edison Storage Battery Company,  
.....

*The place should be  
specified*

Battery - T96

Office of

Ans 4/15/10

*N. Pardee & Company.*

Say, that the new battery is  
all right, there are 2 sizes called *Shippers of Coal*  
A4 & A6 - The Size A4 will go on good roads  
about 100 miles & the A6 will go 150 miles -

Mr. Thomas A. Edison, Rumabont, N. J. can depend  
upon the battery, as to the life of the battery that

My dear Sir: depends upon following our instructions

It is a long time since I have had the privilege of meeting  
you and I think you will remember that I visited your place and made an  
investment in your plant for putting the Ogdensburg Iron Ore into bri-  
quettes. Unfortunately that did not prove an advantageous investment.

It costs a little high to obtain reliability  
I remember you were at that time very much interested in the  
making of a storage battery which would be very much more permanent and  
store very much greater electric power than the lead battery did. I  
understand you have accomplished it and was giving a demonstration a few  
days ago in a Detroit Electric which pleased me very much. I am told they  
use your storage battery and that it has a capacity for running from 160  
to 200 miles on one charge; that it is practically indestructible and  
can be allowed to run down entirely before recharging or can be recharged  
at any period without injury.

I would like you to confirm the truth of these claims and ad-  
vise me whether I would be wise in ordering one of these machines. I have  
great difficulty in walking, and it would be of infinite value to me to  
have a machine that met the claims that are put out for this one. The  
price of the car is high. The car is \$1700. with \$600. added for your stor-  
age battery if used. I would be greatly indebted to you if you would ad-  
vise me in this matter and shall be very glad to own a machine which is  
the result of your genius.

Very truly yours,

*L. M. Howes*

April 5, 1910.

Mr. R. H. Bosch,  
10 Fifth Ave.,  
New York.

My dear Mr. Bosch:

Yours of the 1st inst. has been received, on the subject of guaranteeing Edison batteries, and I am glad to have you write me concerning this matter. At all times I am anxious to receive suggestions and advice from everyone.

The form of guarantee you propose is substantially what I have had in mind if the time comes when Mr. Edison would be willing to make any kind of a guarantee. My only criticism, and in fact the only difficulty I have ever had in thinking over the matter is that the ordinary purchaser might consider the guarantee so guarded as not to be worth very much. Of course I cannot do anything definitely until Mr. Edison returns, but this question is becoming more or less acute and I propose to take up the matter with him when he gets back. He is so thoroughly acquainted with the exact situation that I have no doubt when he is convinced that a guarantee should be made he will have some suggestion that will exactly cover the point.

Yours very truly,

FLD/IWW

Vice-President.

THOMAS A. EDISON  
President

FRANK L. DYER  
Vice-President and General Counsel

*Battery Storage*  
E. G. DODGE  
General Manager

H. F. MILLER  
Serving-Treasurer

## EDISON STORAGE BATTERY CO.

Telephone, 928 Orange

ORANGE, NEW JERSEY April 8  
1910

Mr. F. L. Dyer:

There is a slight change in the figures that I gave you, owing to the fact that the record of cells to be shipped was dated Monday, and the orders on hand dated this morning. The figures now stand as follows:

Cells on hand.....	7935	Cells on hand	7935
Shipping In-		Orders "	" <u>6391</u>
structions.....	<u>1280</u>		
Bal. on hand.....	6655	Bal.....	1544

Mr. Barrett of the Adams Express Company tells me that he will give me shipping instructions for about 2600 cells next week, leaving a balance of 4055. I have promises of shipping instructions for about 1000 more cells next week. This leaves 3055 cells, which added to this week's output of 1400 cells, makes 4455 cells on hand.

Judging by the way the orders have come in this week we would be making a big mistake if we cut down the output. We have received orders for 2282 cells, and I have every reason to believe that we will receive more orders from manufacturers next week, which with what we will sell to replace lead batteries, from now on we will continue to receive orders for more cells than we will produce.

*H. F. Miller*

1094 Shipped

R. H. BEACH  
10 FIFTH AVE., TEL. 1322 GRAMERCY  
NEW YORK

BEACH STORAGE BATTERY CARS  
(USING EDISON STORAGE BATTERIES)

April 12, 1910.

Mr. Frank L. Dyer,  
Vice-President, Edison Storage Battery Co.,  
Orange, N.J.  
Dear Mr. Dyer:

Referring to your favor of the 5th instant; I have worked out another form of guarantee, which might be better than the one sent with my letter of the 1st.

The idea I had in mind in making up this form was to make it appear to be a letter that Mr. Edison had written, and it would seem to me such a letter would appeal strongly to the average buyer as a simple and candid statement and promise on the part of the Battery Company to absolutely guarantee the battery, whereas, in point of fact, it only guarantees the battery when the conditions of operation as per our instructions (which would accompany the guarantee, are complied with precisely.

I have consulted a very eminent jurist on this point, and he assures me that unless the user could prove that he had literally complied with the printed and accepted instructions, he could never recover under such a form of guarantee.

I hand it to you herewith, for whatever it may be worth.

Yours very truly,

(Encls)

*Wardner - I'll work  
other letters relating  
to guarantee, write  
Take up with R.H.B.  
Edison Dyer*

EDISON STORAGE BATTERY COMPANY

Orange, N.J.....

Mr.....

.....

Dear Sir:

We have taken from the A-4 Type of Battery 500 discharges,  
equivalent to 40,000<sup>Car</sup> miles, and the battery has improved in capacity  
about 10% (ten percent). This battery has been in use constantly  
for two and a half years. This result has been accomplished by a care-  
ful and literal compliance with the instructions and directions contain-  
ed in our book of instructions. These instructions are readily under-  
stood and can be followed by men of ordinary experience in handling  
things electrical. When these instructions are thus followed our batter-  
ies will last three years. This we freely guarantee, and furthermore  
guarantee the battery against faulty operation thereof due to defects  
of workmanship or material, and this guarantee will be made good if our  
obligation to do so should arise, by replacing the batteries sent to you  
herewith with new batteries of the same type and specifications.

Yours very truly,

.....  
President.

friends

MILLER REESE HUTCHISON  
ENGINEER  
50 CHURCH STREET  
NEW YORK

CABLE ADDRESS "HASSACON" NEW YORK

file

4/12/10.

APR 12 410

Dear Mr. Edison,

Congratulations on the Battery. You are certainly a miracle. Inspiration has certainly meant perspiration on that job. I am astonished at the increase in efficiency after hard usage, as shown.

The field opened up is simply bewildering. I see the finish of motor buses, overhead trolleys &c.

I have recently finished a 16,000 mile service test of that new demountable rim I showed you. It is all right. Will market it as soon as I hit on the proper people to take it up.

By the way, Klaxon Horn is paying me between \$6000<sup>00</sup> and \$7000<sup>00</sup> per month royalty now. Pretty good "baby".

Hope to have the pleasure of running over to the laboratory soon to look at that Battery.

Sincerely,

M. R. Hutchison.

If you want to have some of those demountables made up in the Lab. for your cars, I'll send Blue Prints over for you to work from if you will advise me as to the size of tires you use.

H.

*Battery station*

## The Stratford Commercial Job Printery



STRATFORD, NEW JERSEY

April 22, 1910

Mr. Thomas A. Edison,

Dear Sir:-

APR 22 9:10

*Ans 4/26/10*

A company has been formed, of which I am a member, to promote a trolley line from Millville to Ocean City, N. J. and we are somewhat interested in your storage battery car, which if practical we would like to install. Can a committee see you and have one hour of your time to discuss the matter next Thursday April 28?

awaiting your favor I am

Yours truly

*L. A. Rush*

Dio. Tsk/W

*Harry. Tell them yes & then  
send copy this to Beach  
& tell him to be on  
hand — with data  
1st fund out of Beach can be here*

*Edison*

[FROM ISAAC W. WALKER]

142 Mr. Dyer:

4/25/10.

Mr. Beach stopped in to see you and said that Mr. Edison had agreed to guarantee the battery for 600 complete discharges and that at the end of that time the rating would not be lowered more than 10%. If the battery is not completely discharged every time, the battery will show up all the better.

He said that the Railway people figure that a car runs about 25,000 miles a year, but that in reality, the average would not be more than about 14,000 miles, so that he figures that it would take about three years for the 600 discharges.

I. W. W.

*Walker*

Battery - TBE

Apr. 26<sup>th</sup> 1910.

# Train Lighting

## Lead

Axle dynamo + appliance weigh 964 lbs  
 16 Cells 171 lbs each weigh 2736 lbs  
 Capacity 300 amperes 9.6 KWH.  
 RR Co pay \$900.00

Straight Lighting  
 32 Cells 171 lbs each weigh 5472 lbs  
 Capacity 300 amp 18 KWH,  
 RR Co pay \$600 to 650

## c Edison

Axle dynamo + appliances weigh 964  
 27 Cells 27 lbs each weigh 729 lbs  
 Capacity 300 amp 9.6 KWH  
 RR pays Axle device \$600. battery 729. \$1329.00

2

## Straight Lighting

A8=50 cells 27 lbs each weigh 1300 lbs  
 Capacity 300 amp 18 KWH.  
 RR Co pay \$1350.00

Suppose the car averages 350 miles per day with straight lighting. 1300 lbs of battery putted this distance equals 227 ton miles. If we change 1/2 cent per ton mile for hauling as cost on this high speed train it amounts to 11.35 per day or \$352. per year of 312 days.

With the lead battery we have 5472 lbs hauled the same distance or 957 ton miles daily which at 1/2 cent per ton mile amounts to \$4.78 daily or \$1491 per year.

It would appear from this that the RR Co could buy our battery, haul it around for a year + then throw it away, and it would be cheaper than it would be to have the lead battery presented to them as a free gift together with a check for \$220.

With axle lighting if our battery lasts 1 1/2 years the RR Co would have to receive lead battery as a gift to complete.

Battery, St.  
Mr. Beach is waiting for  
form of 50 guarantees on  
Edison Battery so he  
can take order for 20 cars.  
Said Mr. Edison sent him  
down to see whether you  
had made up this form.

Beach is to give 50  
guarantees for 20 cars.  
\$1.00  
Warden - Tell Beach I am  
haven't yet decided on  
if guarantee and can't do so  
until Trenton matter is settled -  
Can't he take the order subject to  
a sales factory guarantee being  
made? The are going to give  
a sales factory guarantee  
but have not decided  
on what terms  
A.P.

REFER TO THIS NUMBER  
IN YOUR REPLY

1471

MEMORANDUM

FRANK L. DYER,  
ORANGE, N. J.

142  
Mr. Dyer:

5/2/10.

I hand you herewith a proposed form of guarantee that was worked out yesterday, the idea being to adapt it in the form of a letter to be written to any prospective user of Edison batteries for commercial trucks and who may require a guarantee, consequently, the introductory part will have to be modified to meet each case.

Mr. Edison has concluded not to guarantee the batteries for use with pleasure vehicles, because he believes to do so would result in endless complications, and I do not understand that this is necessary anyway.

I wish you would take this proposed guarantee and ad-

(2)

to it such instructions as are strictly necessary to be followed for the proper handling of the battery. Do this in collaboration with Mr. Holland.

I will be back from Trenton about 5:30 this afternoon and I wish you would have this done so that we can take it up with Mr. Edison at that time.

FLD/IWW

F. L. D.

En -

[ENCLOSURE]

1 1/2

file  
Guarantee:

Regarding the installation of Edison Storage Batteries you propose using our trucks furnished by the

Co, the Edison Storage Battery Co, the Edison Storage Battery Co, the following guarantee:

That Edison Storage Batteries sold for such installation will be capable of discharging (for a period of three years from the date of sale to the user) a capacity of not less than 10% below the following normal rating, with a reasonable increase in the charging rate of recovery:

Type A 4	ampere hours
" A 6	" "
" A 8	" "

That in case of failure to develop such guaranteed rating (except in

the case of failure of the middle element hereafter provided for) the Company at any time within three years from the date of sale, the Company will repair the battery (but not the middle element thereof) to bring it up to such guaranteed capacity, without charge to the user thereof.

[ENCLOSURE]

Guarantees

Regarding the maintenance of Edison Storage Batteries you purchase moving with limited furnished by the Co. the Edison Storage Battery Co. guarantee that such Batteries for a period of three years shall be covered by <sup>developing</sup> ~~proportion~~ <sup>with</sup> ~~the~~ 10% <sup>of the</sup> ~~the~~ rated capacity of the battery (Type A 4 ampere-hours; Type A 6 ampere-hours, and Type A 8 ampere-hours) when a reasonable increase in the charging current is used; and should the Battery fall below this guaranteed rating during said period the Company will rebate to the purchaser a pro rata amount of the list price corresponding to the unexpired portion of the guarantee period of three years, provided always, that the following

instructions as to the handling and use of the battery shall in all respects be ~~to~~ carried out, and that access to the battery shall be allowed <sup>to the Company's inspector</sup> at all reasonable times; and the Company agrees to renew any deterioration element of the battery for one-half the list price of the complete battery, ~~at the time of next renewal~~

Instructions

(1)

[ENCLOSURE]

The Edison Storage Battery guarantee  
~~on~~ batteries sold for use in trucks  
shall ~~not fall below 10%~~ over a period  
of 3 years, be capable of giving  
within 10% of the rated capacity  
of the battery when a reasonable  
increase in the input of current is  
used and will at the end of each  
period renew the Nickel Elements  
which ~~are~~ ~~not~~ ~~to~~  
~~be the same as the element which~~  
~~has been~~ for  $\frac{1}{2}$  of the  
original list price of  
the battery, <sup>allowing</sup> providing that  
the conditions ~~are~~ required by  
the ESB Co appended hereto  
for working a warranty

for the battery shall in all  
respects be carried out  
and that their inspector  
shall be allowed access  
to the battery for inspection

Should the battery ~~be~~ give  
less a period than the  
guarantee, the ~~the~~ purchaser  
shall receive a rebate  
in proportion to the loss of  
time,

[ENCLOSURE]

That in case of any of such batteries falling below such guaranteed rating due to failure or diminished capacity of the middle element, the Company will renew the middle element thereof to bring the battery up to the guaranteed rate at a cost of one-half of the list price of such battery; but if such failure takes place within three years after the sale of the battery to the user the Company will rebate to the user a pro rata amount bearing the same proportion to the list price that the unexpired portion of a three year period bears to three years. Example, if the battery fails in two years from sale, the Company will

renew the same for one-half the list price, and will rebate to the user one-third of the list price, ~~less the original cost of the~~ <sup>less the original cost of the</sup> battery and amount of

(2)

[ENCLOSURE]

(3)

from the date of sale, the Company will make such renewal for one-half the list price of such battery; but in no case will the Company make more than one renewal of any particular cell.

That all Edison <sup>for such installation</sup> batteries are free from defects of workmanship and material, and the Company will make good, without charge, any such defects developing within one year from the sale to the user.

All of the above guarantees are based absolutely upon the condition, accepted by the purchaser when the battery is sold, that in the care and handling of the

(4)

battery, all of the precautions and directions presented by the Company in its catalogues and literature shall be followed by the user; that the battery, at all reasonable times shall be open to inspection by the Edison Storage Battery Co, and that the guarantee shall not extend to the battery if sold by the user to others.

[ENCLOSURE]

(2)

The Edison Storage Battery Company guarantees:

That all Edison Storage Batteries hereafter sold by the Company, or its duly authorized agents, will (for a period of three years from the date of sale through to the user) <sup>be capable of</sup> developing a capacity of not less than 107% below the normal rating of the battery given in the catalogue of the Company, as follows:

Type A 4	authorized
A 6	" "
A 8	" "

That in case of any battery failing below such guaranteed rating, and it being impracticable to develop the same with a reasonable

maximum in the charging rate, the Company will replace the same with a new battery of the same capacity, without cost, except that the user shall pay <sup>pro rata</sup> ~~an~~ amount equal to the proportion which the service obtained from the original battery bears to the guaranteed period of three years. Example: Should the battery fall below the guaranteed rating as above, one year from the date of sale, the user shall pay for the new battery of same capacity,  $33\frac{1}{3}\%$  of the list price at the date of exchange.

That in case any Edison battery hereafter sold falls more than 107% below the normal rating

[ENCLOSURE]

(3)  
thereof at any time after the third year and before the seventh year subsequent to the <sup>one or other</sup> sale thereof to the user, due to the failure of the active materials thereof, the Company will renew the same to bring it up to its normal capacity for one half of the list price of the same or equivalent cells quoted by this Company at the time of such renewal.

That all Edison batteries are free from defects of workmanship and material, and the Company will make good, without charge, any such defects developing within one year from the sale to the user.

All of the above guarantees

(4)  
are based absolutely upon the condition, accepted by the purchaser when the battery is bought, that in the care and handling of the battery, all of the precautions and directions prescribed by the Company in its catalogues and literature shall be followed by the user; and the Company reserves the right to decline to carry out the above guarantee if in the judgement of its engineers the battery gives evidence of careless handling or abuse.

It is furthermore understood that the above guarantees apply only so long as the battery remains the property

[ENCLOSURE]

(5)

of the original user theory, and  
do not follow the letters  
into the hands.

[ENCLOSURE]

PROPOSED GUARANTEE

Gentlemen:

Regarding the installation of Edison Storage Batteries you propose using with trucks furnished by the \_\_\_\_\_ Co., the Edison Storage Battery Co. Guarantees that such batteries for a period of three years shall be capable of developing within 10% of the rated capacity of the battery (Type A-4 \_\_\_\_\_ ampere hours; Type A-6 \_\_\_\_\_ ampere hours, and Type A-8 \_\_\_\_\_ ampere hours) when a reasonable increase in the charging current is used; and should the battery fall below such guaranteed rating during said period the Company will rebate to the purchaser a pro rata amount of the list price corresponding to the unexpired portion of the guaranteed period of three years, provided always, that the following instructions as to the handling and use of the battery shall in all respects be carried out, and that access to the batteries shall be allowed to the Company's inspector at all reasonable times; and the Company agrees to renew any deteriorated element of the battery for one-half the list price of the complete battery.

INSTRUCTIONS

(1)

[ENCLOSURE]

THE EDISON STORAGE BATTERY COMPANY guarantees that a certain Edison storage battery No.....consisting of.....cells Type....., having a rated capacity of .....ampere-hours, shall maintain at all times during a period of.....years from the.....day of..... 191 , an efficiency of not less than.....per cent.of the above rated capacity, provided that the instructions of the Edison Storage Battery Company, relating to the care and operation of the battery, are complied with and followed, and provided further that the Edison Storage Battery Company shall at all reasonable times be allowed access to the battery for testing and inspection.

It is understood and agreed that the terms of this guarantee will be complied with by the Edison Storage Battery Company replacing the defective battery with a new battery of equal rated capacity.

It is further understood and agreed that in the event of such replacement the purchaser shall pay to the Edison Storage Battery Company a pro rata amount equal to the proportion which the service obtained from the original battery bears to the full term of.....years covered by this guarantee.

Memo.

Mr. Edison wishes to have a report made on the Battery Company made by Mr. Lybrand as of April 30, 1910, and Lybrand has been directed to make this report.

As soon as the report is received, call a meeting of the Battery Company stockholders and put the report before them.

The Battery Company owes Mr. Edison in the neighborhood of \$1,300,000, secured by promissory notes. Edison proposes either

- (1) That the company's indebtedness to him be covered by new notes falling due in two years, or
- (2) That the capital stock of the Company be increased to \$2,500,000. This would mean an increase of \$1,500,000, and he would accept stock at par in payment for his claim. This would wipe out this large debt of the Company and would leave upwards of \$100,000 in stock, which could be sold to provide cash. Although Mr. Edison controls 75% or more of the stock, he wants to have the minority stockholders perfectly satisfied in this matter and wishes to leave to them if possible the decision as to which course to adopt.

5/9/10.

R. I. D.

*Ans. J. -  
Please refer to the meeting only  
we had 2/24/10. Only \$100,000 and that  
is minor to Edison's \$1,300,000. To have a  
definite plan in writing to prepare  
Hendall*

(7/9/10)

TO THE STOCKHOLDERS OF THE EDISON STORAGE BATTERY COMPANY:

142

The essential purpose of the present meeting is to discuss ways and means for the liquidation of Mr. Edison's account against the Edison Storage Battery Company and to agree upon a plan for doing so.

Mr. Edison personally controls more than 75% of the capital stock of the company and could therefore decide the question himself and his decision in the matter could be questioned only in case of fraud. Nevertheless, he desires to have the situation laid before all of the stockholders in order that he may have the benefit of their advice even though in justice to himself he may not be able to agree with their views. The stockholders may, however, be reminded of the fact that all of the outside stock, amounting to 25% of the total, was presented by Mr. Edison as a bonus in connection with the sale of the bonds of the company and does not represent money invested, at least by the original outside stockholders. So far as the bonds of the Company are concerned, knowing as we do the perfected condition of the Edison battery and the great demand it must inevitably have, there is no reason for the slightest uneasiness or doubt as to the value of these securities.

The experimental development of the Edison Storage Battery involved such enormous difficulties that if Mr. Edison had had any idea as to their extent he probably would not have undertaken the work. When the original bond issue was made, by which a cash capital of \$500,000 was provided, Mr. Edison felt confident that that capital would be sufficient to conduct all

(11)

experiments and put the battery on the market as a commercial proposition. It is not necessary to refer to the extent of these experiments except to say that they numbered many thousands. As is well known, the first form of battery that was put on the market developed defects which were not anticipated, and, although that battery was superior to any competing device, it did not realize Mr. Edison's expectations, and it was therefore withdrawn and its manufacture stopped, except to the extent of making replacements. Following the withdrawal of the first type of battery from the market, a greater number of experiments were made, resulting in the production of the present perfected Edison Battery, which has now been manufactured and sold for about a year and which has more than realized Mr. Edison's most ardent hopes. The introduction of the new battery has no doubt been somewhat affected by the unfortunate experience with the earlier type; and by the very vigorous and in some cases questionable methods of the Lead Battery people to prevent its introduction. Furthermore, most of the electric vehicles made in this country were especially designed for lead batteries and required modifications to fit them most effectively for Edison batteries; and, finally, we found that many of the vehicle manufacturers were bound by contracts to use lead batteries only, but these contracts are now expiring and none, we believe, runs beyond the present year. I am glad to say, however, that the demand for the new battery is slowly increasing, electric vehicle manufacturers and other users are recognizing its merits and are designing their present models for its use. At the present time the output of the factory is equivalent to about 160 A-4 cells per day, all of which are being sold, and the interest

(3)

which is being manifested on all sides in the battery convinces us that the demand will very largely increase within a short time. Even at the rate of 150 A-4 cells per day, the factory is almost able to pay its operating and selling expenses, including the cost of manufacture, so that with an increase in the business profitable results may be expected.

At the present time, therefore, the situation of the Edison Storage Battery Company is that it is in possession of a perfected storage battery with all the patents thereon, with secret processes at its command and with a tremendous experience that has been acquired during the past nine years together also with a plant fully equipped to turn out the batteries at a sufficient rate to make the business a profitable one as soon as the demand slightly increases. As to the ultimate success of the enterprise we do not entertain the slightest doubt.

The expense in connection with the development of the perfected battery up to the present point, including experiments and plant, with its equipment and for carrying on the business since the introduction of the battery about a year ago, has been upwards of \$2,500,000, as appears from the report of Messrs. Lybrand, Ross Bros. & Montgomery, certified public accountants, for the year ending February 28, 1910. On that date the Edison Storage Battery Company owed Mr. Edison \$1,544,745.29 on open account for money advanced by Mr. Edison to carry the enterprise on and eventually to realize something for the stockholders. Since that date the amount has increased somewhat, so that on June 30, 1910, with interest, it was \$1,998,276.86. The question now for consideration is, how shall this account be liquidated? Two plans have been suggested tentatively by Mr.

(4)

Edison, either one of which he is willing to accept.

(1) The Company might give interest bearing notes to Mr. Edison for the amount of the indebtedness, payable in two or three years from date.

*Shaw* *Edison*  
*June 10, 1888*  
(2) The capital stock of the Company might be increased by an additional issue of \$2,500,000 and his debt liquidated by paying stock at par.

We put these plans before the stockholders in order that they may be discussed by them.

Respectfully submitted,

FID/IWW

Vice-President.

43

May 10, 1910.

Mr. George F. Dyer,  
Navy Department,  
Washington, D. C.

My dear George:

Mr. Edison has requested me to find out the names of the concerns in this country who manufacture submarine boats. Have you any records in the Navy Department that would give this information. If so, I will be very much obliged if you will make a list of these concerns for me.

Yours,

FLB/IWW

\*ALL NECESSARY AND INFORMATION COPIES USED  
HERE SHOULD BE OLIVER WORKS MARK.

ADDRESS ALL CORRESPONDENCE TO US AND NOT TO ANY INDIVIDUAL OFFICER OR EMPLOYEE.



FACTORY, SOUTH BEND, IND. U.S.A.

### **OLIVER CHILLED PLOW WORKS.**

CHILLED & STEEL WALKING & RIDING PLOWS.

*South Bend, Ind. May 10, 1910.*

Edison Laboratory,  
Menlo Park, New Jersey.

Gentlemen:-

Referring to the article by Walter  
E. Holland in the April 28th edition of the  
"Electrical World", we beg to inquire if you  
are now prepared to manufacture or furnish  
Storage Batteries for Industrial Locomotive  
purposes. If so, kindly advise if you could  
have a representative call within the near future.

Yours truly,

OLIVER CHILLED PLOW WORKS.

*A. A. Erickson*  
Purchasing Agent.

MA 13 1910

*Ans 5/14*

AAF-LGM

Post-TAE  
J.H. Dyer, Port Channing Hotel  
Detroit Mich

Telegraph Dyer -  
that Oliver Chilled  
Flow Co South Bend  
Indiana want Galleries  
for Industrial Locomotives  
better call & see  
them, Important  
Concern

Sent 1:15 pm  
May 3/1910  
W.H. G.C.

*Am 5/10 Battery. TAE*

## MORRISTOWN CIVIC ASSOCIATION

FREDERICK B. KELLLOGG, President

JNO. H. B. CORRIELL, Vice-Pres. & Treas. OSCAR B. SMITH, Jr., Secretary

MORRISTOWN, N. J., May 17th 1910.

Mr. Thomas A. Edison,  
Orange,  
New Jersey.

Dear Sir:

Our local traction company now have a franchise through  
one of the main streets of Morristown ending at the city park in  
the center of the town. They will soon make application for per-  
mission to lay their tracks around the park and so on to the rail-  
road station. As the town has succeeded after many years' work  
in ridding the park and some of the main streets of poles, it is  
very much desired that the company shall operate their cars around  
the park without the use of poles, and we beg to inquire if no  
demonstration of your storage battery has proved practicable for  
this purpose and what the cost of installing a car with such ar-  
rangement would be.

Thanking you for your kindness and any expression of  
opinion or suggestion, we are

Very truly yours,

*John B. Corriell*  
Vice-President.

*May 17 1910*  
*Seeing there is no*  
*trouble to operate*  
*the battery car but the*  
*costs might make it*  
*impossible to do it*

*without the*  
*whole road was*  
*equipped with this*  
*kind of cars + great*  
*expense might be done*  
*the traction people*  
*should you compel*  
*them to use it*

5

ERIE RAILROAD COMPANY

NEW YORK, NORFOLK AND WESTERN RAILROAD CO. THE NEW JERSEY AND NEW YORK RAILROAD CO.  
CHICAGO AND ERIE RAILROAD CO.

ONE BLOCK FROM  
FULTON ST. SUBWAY STATION  
CORPLANDS NO. 1, STATIONS

FULTON BUILDING, HUDSON TERMINAL  
50 CHURCH STREET, CORNER FULTON  
NEW YORK

TELEPHONE 9180 CANTLANDT

OFFICE OF ASSISTANT TO THE PRESIDENT

May 17, 1910

Mr. Thos. A. Edison,  
Valley Road,  
West Orange, N.J.

Dear Sir:-

Mr. Underwood has detailed to me your conversation with him with reference to your storage battery proposition. He is very much interested in it, and I also feel a considerable interest in it and wish that your hopes may be realized. I shall be very glad to go over with a suitable representative and look at it on any day it is convenient for you. Any day next week will be satisfactory to me.

Yours very truly,

*J. B. McMahon*

Asst't to President.

*Come over any day next week - but 1st ask on telephone to be sure I will be here.*

{

Ed. Hand 1916 Post

Ans  
MAY 23 1916

PB Shaw

Wilmington Pa

My Dear Shaw,

Another epoch making device

is now in the field - the new

Storage Battery - plenty of

business ahead, if you

are not too old & I guess

you are not. When you  
come to N York Come over

& let me show you  
something - Edwin

Shaw, P.O.  
for initials

Ans 4/5/10

P. B. SHAW  
WILLIAMSPORT PA.

May 28th, 1910.

Shaw - When you propose  
Coming by telegraph or telephone to  
be sure I will be at  
home - Edison

Mr. Thos. A. Edison,

Mewelllyn Park,

Orange, N.J.

My Dear Mr. Edison:-

On my return home to-day I find your letter of May 23rd, and have noted the contents.

Replying to the suggestion that I might be too old to take up such a subject, I have only to say that if an old fellow like you can invent or produce a battery, I guess I would be in the running if I undertook to sell it. However, I would be barred from attempting to become interested in it, since I am already very largely interested in the best lead battery ever made, and it is my purpose to give the energy necessary to make this a success before I would tackle any new proposition.

Do you remember in one of our talks in the long ago at old 65 Fifth Avenue, when I asked you your opinion of the storage battery you replied that you did not know much about it, but that you never had "much luck with wet electricity". That suggestion had the effect to keep me out of wet electricity for a great many years, but now that I am in it and from your letter I find that you, too, are dabbling in "wet" electricity, the incident struck me as a little funny.

I am going to accept your invitation to come over and look at your battery and have you, personally, tell me the story of its possibilities, but the real purpose of my visit will be to see and talk with you. Do you expect to be at the works for any length of time, or will you be scurrying away to some seashore or mountain resort? I am going to make this trip over there very soon, that is, within the next two or three weeks, and if you are not going to be on the job yourself, advise me, and I will postpone the trip until such time as I will be sure to meet you.

Hoping that your health and behavior are as good as that of myself, I remain,

Very truly yours,

P. B. Shaw

ADDRESS YOUR REPLY TO A. B. EMERY, ASSISTANT MANAGER, VELARDEÑA, DGO., MEXICO.

AMERICAN SMELTING & REFINING Co.,  
AMERICAN SMELTERS SECURITIES Co.  
M. GUGGENHEIM'S SONS

165 BROADWAY  
NEW YORK

MINING DEPARTMENT

GEO. C. KAUFMAN, GENL. MANAGER.

NORTHERN DIVISION

SOUTHERN DIVISION

W.M. DUBUY, ASST. MGR.

A. B. EMERY, ASST. MGR.

SANTA BARBARA, CHIH. MEX.

VELARDEÑA, DGO. MEX.

IN REPLY REFER TO

*Return letter  
to my bank*

Velardeña, Durango, Mexico.

May 29th, 1910.

By

JUN - 1910

Edison Storage Battery Co.,

104 Lakeside Ave.,

Orange, N. J., U.S.A.

Gentlemen:

I have recently been advised that you manufacture a storage battery suitable to be used for supplying current to an electric locomotive. We have a narrow gauge railroad about 20 miles long, operating over 3-1/2% grade at this plant, and if it is feasible to operate a locomotive supplied by storage battery mounted on the locomotive, we should prefer considering this type of haulage equipment rather than the steam locomotive. We haul about 14 empty cars up this grade, each car weighing about 22,700 lbs. We use 40 lb. rails on a 36" track.

Yours very truly,

*A. B. Emery*  
Assistant Manager.

*M. Edison*  
*2*

100-1

[ATTACHMENT]

Box - Cd - Hard

Waste 6/16

AD Enery

What proportion of the total length of 20 miles is  $3\frac{1}{2}$  percent grade. The General Electric Engineers, seem to be sure on high grades if long on account of the heating of Motors.

The battery is rather expensive but it will do these work satisfactorily - Do you have cheap coal or only water power please give further information ~~and~~ ~~to with~~ ~~for~~ ~~as~~ ~~has~~ ~~also~~ ~~on~~ ~~the~~ ~~fact~~ ~~for~~ ~~the~~ ~~purpose~~ J. Johnson

Battery (?)

*New York Central & Hudson River R.R. Co.  
Grand Central Station,*

*George W. Kithledge,  
Chief Engineer,  
New York.*

K-2

June 3, 1910.

Mr. Thomas W. Edison,  
Orange, N. J.

JUN 6-210  
Ans 6/8/10

Dear Sir:

Under instructions from our President, Mr. W. C. Brown, Mr. E. B. Zette, Mr. J. D. Keiley and myself have been instructed to pay you a visit and to make a report as to the merits of the storage battery which has been developed by you.

Can you name a day, probably the latter part of next week, when it will be convenient for you to see us?

Yours truly,

*George W. Kithledge*  
Chief Engineer.

*Write & say come any time at  
their convenience but to be sure  
ask on telephone & be sure*

*S. C. Brown*

[JUNE 3, 1910]

Pat. TAE

181 La Salle St.  
Chicago 90

Brown J. Donald  
Friend Donald

I suppose you know

that I have lately brought out the perfected Alkaline battery. The first form ~~which~~  
I brought out ~~before~~ <sup>first</sup> was too heavy & did not have the life which I knew was necessary to solve vehicle traction and I stopped making them. This stoppage has been over 3 1/2 years. The old batteries gave from 2 1/2 to 4 years & Tiffany & Co. have trucks with the old batteries which are still running. 4 1/2 yrs. - After shutting down the factory I started an enormous number of experiments & developed the present type, but refrained from introducing it until actual

2  
tests on full sized cells gave 500 full charges & discharges without showing any loss of capacity. At the present time I have cells which show a higher capacity after 700 complete charges & discharges than the did when they started. I am now mfg 270 cells daily of what we call A4 & A6. A4 is rated 150 amp 1.2 V. ~~but~~ <sup>will</sup> give 180 amp - 9 ~~hours~~ <sup>enough</sup>. You curve showing characteristics of the cells - 100 cells of A8 weighing - lbs is now running Beach's Car on 28<sup>th</sup> St NY. This runs car all day & can make 80 miles on a 4 1/2 hours charge - but the type is more



The Economy in watts is not good but there is no transmission losses to amount to anything & no resistances are required both motors & batteries by Controller manipulation gives <sup>So the more factor is very favorable</sup> great range. The battery on car will weigh 19 tons this with the heater, air compressor etc will give traction enough as they want more frequent trains & less cars. There are 19 stops in 27 miles. The batteries are very expensive but not excessively so, I estimate that each loco will cost \$42,000 & that 32 of them will displace over 100 Steam locs, the Erie Engr say 180 but this seems incredible. The Genl Elec Engrs are figuring on the car. The Erie people deem it a great advantage to be able to put on say 2 Battery

Locos & the many trains they will shuttle & not interfere with their regular system, and if successful can gradually change over <sup>the whole system</sup> without risk, & not have any large investment. Even if they had to put in power houses they would be small, on account of constant load. Mr Melvin of the New Haven & Mr Brown of the NY Central are to have their Engineers look into this scheme as they tell me they have a very large number of branch lines that are losing money. I write you fully ~~on this subject~~ as I know you are a large factor in Elec RR Engineering and this scheme might fit a few cases <sup>called to your attention</sup> better than the regular method.

J. C. C.

Battery - TAE

THE NEW YORK EDISON COMPANY,  
25 NASSAU STREETS,  
NEW YORK

Aug 6/4/10

The Erie RR & think is going to  
Electrify their Sunburnham Bay with  
the Storage Battery locomotion. Their Engineers  
are working on it & also I sent Elec people  
I furnished battery - They could buy  
~~several~~ several <sup>June 3, 1910</sup> K. L. Smith  
& would never need to take it at bank

H. F. Miller, Esq., Secretary,  
Laboratory of Thomas A. Edison, Esq.,  
Orange, N. J.

Dear Mr. Miller: as batteries only use 1/3rd of their  
capacity - This scheme is working

Permit me to acknowledge the receipt of your  
favor of the 31st ultimo. We have no Edison service on  
back of work and gradual changing  
the New Jersey side of the North River. A plan has been  
from steam to electricity  
under consideration to utilize one of the large generating  
plants in Jersey City. This might make available a large  
supply such as that to which you refer.  
The river will have current 500 V straight

If you will kindly give me some further details

I shall be glad to submit the matter to our Vice President.

Mr. N. F. Brady. As you know, Mr. Brady is greatly  
interested in anything that concerns Mr. Edison, and I  
am sure he will be glad to make every personal effort to  
carry out Mr. Edison's wishes.

I am sailing for Europe next Thursday - the 9th -  
and would therefore very much like to get this information  
as soon as may be convenient.

Truly yours,

Arthur Williams  
General Inspector.

AW/BR

writing

June 9th - 1910

writing

Abrogast.

Your greens are running  
150 shy on long tubes

1150 1330 1350 1360

They are growing worse

1370

gradually & it is

1110 1140 1170 1190

becoming serious

1220 1240 1260 1280

You have made some

1300

change or you are

not checking operations

get busy

Edison

June 9<sup>th</sup> 1910.

My dear Insull:

Marsh wrote the letter,

I understood the scheme was for the Central  
Stations to advertise the Electric Vehicle,  
and that the Phila people were to have  
charge of it. If it's to be their own  
advertisement and the stations are to help,  
I have quite misunderstood the scheme.

Signed

Edison

Original in Mr. E's writing sent Mr. Insull  
yellow pad - pencil - June 9/10  
Ede

St (w. & S)

FRANK J. SPRAGUE  
105 BROADWAY  
NEW YORK

Say -

ans.  
June 16-10

as soon as get Railway cable  
Curves, will send to you. JUN 15 1911  
Think the Battery is too expensive for  
work you want as weight can't be heavy;  
about if discharge rate must be  
enormous then it's even completely

I shall be particular  
by interested in the  
effect of the inner edge  
battery, you are preparing  
for railroad work - and  
hope you can let me  
have the necessary  
data at an early date,  
including charging and  
discharging curves -

I wish to make some  
calculations as to its  
possible use in connection  
with direct supply - in  
an adjacent capacity -  
floating on the line,  
but entirely relied upon  
in certain conditions of  
yards, where entire or  
partial elimination  
of conductors may be  
advisable; also its effect  
on reducing peak pulls on  
retarders, and losses on  
line - Sincerely -  
Sprague

REFER TO THIS NUMBER  
IN YOUR REPLY

1602

MEMORANDUM

FRANK L. DYER,  
ORANGE, N. J.

Mr. Dodge:

6/15/10.

Regarding the daily reports which are received from the Edison Storage Battery Co., it would help me a good deal to understand these reports if you would include the cells under the headings "Orders received to-day", "Orders received this month to date", "Unfilled orders", "Average shipments to date", "Average orders received daily to date" and "Stock on hand and ready to test to-day" in red ink at the right of the present figures reduced to equivalent of A-4 cells. Also advise me concerning the cells on unfilled orders. Can you include somewhere on the report the cells that are ordered with definite shipping instructions, to distinguish them from orders that can be cancelled?

F.L.D.

Address H Miller Engineer  
Bathurst  
TFL - - Rock Island RR Office  
115 Broadway

H Miller Esq. am.  
June 16-10

~~Dear Sir~~  
Dear Sir

Murphy's report received -

The General Electric Engineers  
do not seem to endorse ~~favor~~  
the motor proposition. They say  
the heating of motors will  
be excessive. These people are

in a rut & can't get out -

<sup>am working on it myself</sup>  
I have ~~a great deal of work~~  
<sup>19 find it impracticable with machinery will not work</sup>  
~~done~~ think I know what

is wanted to cut <sup>pull</sup> the  
amount of freight <sup>stock</sup> over the  
road daily without any abnormal  
cost per ton mile and with  
the least possible investment  
~~at present~~ ~~character~~

no matter how it is done -

I suppose of course you  
have exhausted all the

possibilities of doing it  
with geared locomotives  
etc

Edison

I will sign

FORM 512

RECEIVED 1910

**COMMONWEALTH EDISON COMPANY,**

EDISON BUILDING, 130 ADAMS STREET,

CHICAGO, ILL.

ADDRESS ALL COMMUNICATIONS TO THE COMPANY

June 16, 1910.

Thomas A. Edison, Esq.,

Orange, N.J.

JUN 18 1910

My Dear Edison.

I received from my friend Merz an inquiry as to the Edison storage battery, and have sent him a letter, dated the 14th, copy of which I enclose you. Would you let me have your personal criticisms, in your own hand writing, of my letter to Merz?

Yours truly

*Samuel Insull*

encl

[ENCLOSURE]

( COPY )

June 14th, 1910.

Charles H. Merz, Esq.,  
C/O Messrs. Merz and McLellan,  
28 Victoria Street,  
Westminster, London, S. W.

Dear Mr. Merz:-

I have your letter of June 3rd, relative to the Edison Storage Batteries. Mr. Edison is undoubtedly going ahead very energetically in the manufacture of batteries and I hear much that would indicate that the battery promises very well. I am not informed as to just what progress is being made in the development of various types of batteries, but apparently the most progress has been made in developing those suitable for use with electric vehicles.

The most concrete information I have is some obtained from six months experience with two batteries used in operating light traffic wagons for this Company. These wagons have been in daily use. The batteries each consist of 70 cells at 1.2 volts each. The entire battery weighs 1200 pounds.

The lead batteries which we are using in other vehicles, doing the same work, consist of 42 cells, each giving two volts. They weigh 1600 pounds. The output of the lead battery is 140 ampere hours, and that of the Edison 225 ampere hours. At present the batteries are very expensive. The price of the Edison Battery is approximately \$1300. or \$1400.00 whereas that of the lead battery is about \$350.00. We estimate the life of a lead battery at approximately three years, although during this time it was necessary to renew all of the positive, and some of the negative plates, so that the repairs during this period amount to nearly the first cost of the battery, or an expenditure of, say, \$700.00 in all for the battery, first cost and up-keep, during three years. On the other hand, my people think from all indications, from the six months use, that the life of the Edison Battery will be very long and that the repairs would be probably lower than in the case of the lead batteries.

My people report one performance which may interest you, where an Edison Battery went without being charged for three days, giving out 287 ampere hours and giving a vehicle mileage of 67 miles, on a wagon where the use of electricity was not particularly efficient. It probably would have gone as high as 100 miles on some of our most efficient wagons.

As to the performance of electric vehicles, I am sending you under separate cover a reprint from one of the January issues of the "World and Engineer," the information contained in which was obtained from traffic wagons operated by this company.

Yours truly

(Signed) Samuel Insull, President.

Battery-TAT

A. D. HERMANCIE  
405 WEST FOURTH STREET  
WILLIAMSPORT, PA.

Hermancise = We do not guarantee battery  
except to stores where they use several vehicles  
& our inspectors can see that they use them  
right. ~~the~~ I can't say if your vehicle has  
room to put in the new battery or what make is  
June 20, 1910

My dear Mr. Edison  
it is <sup>kindly</sup> <sup>very</sup> <sup>much</sup> <sup>appreciated</sup>  
yours 16 = Chicago  
not say what guarantee, if any

you give with your battery  
I have a good car in which  
I would like to place your  
batteries. 24 cells. 144 miles on 11000  
There is not much of your  
batteries in this city  
Will you sell me a  
set & if so at what price  
If you will. I'll go  
fishing with you next  
winter

Yours truly  
A. D. Hermancise

Battery  
Writing  
TAE

W. W. Finley  
June 18 - 1910 1300 Pennsylvania Ave  
Washington  
DC

Find out address of  
President Southern  
Railway Co  
& address a letter this  
(Twilsign)

— — — Fredt

I learn from the newspapers  
that the Southern RR  
contemplates using some  
gas electric Cars, I desire  
to call your attention before  
you go too far, that with  
my new Storage Battery, the  
Storage Battery Car, & locomotives  
will solve the problem of making  
branch lines pay better than by  
any other method, I am at

present engaged in working up  
a system of Electrifying  
the N York End of the RR system  
by using Storage Battery  
Locomotives, doing away  
with Tralleys & permitting a  
gradual transition from  
Steam to Electric with no  
risk as to investment,

Yours

W. W. Finley  
Twilsign

Battery  
TABLE  
E. B. PADGHAM,  
PHOTOGRAPHER,  
16 W. Third Street,  
ST. CHARLES, ILL.

It is impossible to test the  
Nickel Element & be sure

it will right in a long period  
than 3 years we have so far

JUN 20 1910

St. Charles Ill June 18, 1910  
Mr. Edison  
I have tested H500 different kinds  
of Nickel Elements some worked  
off and on for 4 years  
in a storage battery  
similar to yours. you see  
I think I have a positive  
plate better than your  
nickle plate but nothing  
to take the place of  
your iron which is  
certainly all right.  
Now if I send you  
a small positive plate  
charged will you try  
it in comparison with  
your nickle plate?  
If it is any advantage  
to you use it and  
give me whatever you

E. B. PADGHAM,  
PHOTOGRAPHER,  
18 W. Third Street,  
ST. CHARLES, ILL.

see fit. Am too poor  
to show anything with  
it myself.

If you like the per-  
formance of the plate  
Will tell you anything  
you want to know about  
it. Just put it in one of  
your cells and use in-  
stead of your nickel  
plate. Hoping to hear  
from you I remain

Resd E. B. Padgham,  
St. Charles,  
Illinois.

P.S. I wrote to about it about  
3 years ago but you did  
not answer

Reid Allen

JUN 20 1919

My Dear Inaudi -

You ask for criticism on your letter to your friend Mary -

I think I better take this chance to post you thoroughly on the subject, I can see from the experience I have had so far that I will have a tremendous job in procuring the battery among our Central station people. on account of the ~~years~~ bad reputation the electricians have obtained because of the lead battery. It seems too bad that ~~the~~ all of the electrical people must go through the long dreary Educational process like we did with the light and other things - But they will, in time understand, that the greatest market for Electricals, will

2

be the Electric Vehicle because now they have the only missing link - to wit a reliable, low depreciation storage of power device, that requires not watching or chemical manipulations & numerous precautions to make it work - but a plain husky device which may be under charged, overcharged, stand charged or discharged for any length of time, can be shorted circuited so a single cell will give 1000 amperes. It can be dropped from a height of 2 miles on a hard board for 1 million times without mechanical or chemical injury

3

that it will hold a high percent of its charge for 3 years showing ~~no~~ no local action,

It has another quality which is surprising to a lead battery man ~~that~~ <sup>and that</sup> is that a cell whose normal rate of discharge is 30 amperes, gives the same ampere capacity if discharged at 200 amperes ~~is~~ in other words its capacity is independent of the discharge rate. As you probably have learned I am guaranteeing 3 years life in a truck <sup>battery</sup>. The hardest work on a battery is in the department stores. Their trucks go about

4

297 days a year and stop & start from 150 To 350 times a day. City work make 25 To 35 miles a day - under these conditions of high discharge rates the lead battery with good care lasts on an average one year. The renewal labor etc costs from 35 To 50% of the original cost, as the lead battery gets older they take it off the longer runs & put it on shorter runs, to prevent too much pulling in which disturbs their system. On longer runs they use horses but many like Macy, Vantine, Hearn have put in our battery & do the suburban Hearn & Co have the longest delivery

5

route of any dept store in  
 NY to with 66 miles <sup>100 to 150</sup> which is done with a  
 Land in Vehicle & E battery  
 I have in the last 5 years  
 investigated the trucking  
 business pretty thoroughly &  
 they have been very <sup>slow</sup> ~~accommodating~~  
 to me allowing access to  
 books, photos, <sup>data</sup> costs - delays  
 & I have got their ideas,

It seems that ~~the~~ reliability  
 is the one thing they want, first,  
 next cheapness for 1000 deliveries

They say that their delivery system  
 is as complicated as a railroad  
 time table that the ~~store~~  
 vehicle is a small part

6

of their business & that  
 they must have something  
 very reliable that will  
 not disorganize it.

I suppose they mean by  
 analogy that for instance  
 they like the electric light  
 for their stores but they don't  
 want a light that will  
 go out for 10 minutes 3 or  
 4 times a year with their  
 store full of customers.

Regarding the expense of the  
 battery or first cost  
 You can hardly compare a  
 lead battery with mine because  
 our commences to deteriorate  
 the moment it is put in  
 & lead in a year

7

You say in your letter  
 that ~~you~~ cost of  
 Lead Battery is \$350  
 + E battery 1400. That one  
 has 140 amp & the other  
 225, as a matter of fact  
 these two Galleries cannot  
 be compared ~~in~~  
 this way. Because the  
 Lead Battery has 11480 watt  
 hours, & the Edison 18900-  
~~at same price per watt~~  
~~But of the lead battery~~  
 If lead battery gave same  
 watts as E it would  
 cost <sup>on your basis</sup> \$567, & in a Macy Truck  
 it could be regenerated  
 for every year after for

8

\$283, per year - at the end  
 of 3 years period of guarantee  
 I give which guarantee  
 says the battery shall  
 be capable of giving  
 the rated Capacity.  
 The Lead Battery would  
 have cost \$1133, & be dead  
 whereas the E Battery  
 will ~~be~~ still be ~~down~~  
 & capable of giving  
 its guaranteed capacity  
 at the end of 4 years.  
 The Edison in first cost  
 would be the cheapest,  
 But remember the firm  
 who uses the lead battery  
 is not going to have these

9

uncertain ~~the~~ trouble &  
 miss ~~the~~ of his garage  
 to purchase ~~the~~ extra battery so no delay of  
 vehicle, pulling in of stalled  
 vehicle especially in winter  
 lack of mileage in winter  
 so distant delivery can't  
 be made at all - if  
 he can get something reliable  
 even if it costs more -  
 had ~~the~~ 15 lead battery truck  
 for 10 yrs & 10 Lawden trucks  
 for 5 yrs, ~~with all same battery~~  
 he has scrapped the lead  
 vehicles & bought all  
 Lawden,

Another thing I want  
 to call your attention to  
 is ~~that~~

10

is the weight of the lead battery  
 Edison  
 The battery you ~~have~~ mention  
 in your truck weighs  
 1365 lbs, & has 18900  
 watt hour capacity. If you  
 increase you lead battery  
 to get the same capacity  
 its weight will be  
 about 2600 lbs - If the  
 vehicle is made right  
 to carry the Ea battery &  
 its rated load, then it  
 cannot carry the lead  
 battery with the same  
 weight. Because it would  
 have an overload of  
 1235 pounds, If it is a

2 ton wagon with E battery  
 Its only  $1\frac{1}{2}$  ton with  
 the lead, - If two tons is  
 to be carried the chassis  
 should be strengthened to  
 carry the extra 1235 lbs of  
 lead - If this is done the  
 lead battery will on  
 close analysis be found  
 a very expensive affair -  
 If we adopt the idea that  
 a pound of chassis should  
~~just~~ carry a lb of  
 removable matter ~~then~~  
 & most vehicle makers  
 haven't reached this point  
 then the vehicle should  
 be strengthened by

Adding 1235 lbs <sup>off the chassis</sup> making  
 a total of 2470 lbs  
 extra over the E truck  
 But now the watt hour  
 capacity of the lead  
 although the same as  
 your E truck will not  
 give the mileage <sup>because it</sup>  
<sub>you must put this out 2470 lbs</sub>

Up to the present time  
 trucks are sold to the  
 public ~~at~~ without battery  
 at from 48 cents to 90 cents  
 per pound - The General  
 Vehicle Co sell for 90 cents  
 without battery & around  
 \$110 around 80. The lowest  
 cost <sup>of manufacture</sup> known of is 57  
 cents, The few vehicle

do not seem to have prospered, <sup>even</sup> at 90 Cents I sell batteries at 1<sup>00</sup> per pound, if you compare the two things you will see that 90 c Cents for a chassis is an outrageous price as compared to the battery where I have to buy expensive nickel lithium high grade steel ribbon ~~and~~ hard rubber some of which is \$3. per lb the making of the battery is a highly ~~well~~ organized proposition, and to get the all important quality of Reliability & light wt

I am compelled to do it to solve this vehicle proposition commercially

Returning to the necessity of strengthening the vehicle to carry the extra weight of the lead over the ~~if the~~ If you bought another vehicle thus strengthened & put in a lead battery to give the same wallage as the E you would not only pay ~~the~~ \$567 for the battery but certainly \$700 additional for the extra strong chassis a total of \$1367 -



17

The other day I went over to the Water front to watch the Congestion of Vehicles. It is certainly getting bad. Its only in last few years that the Mounted Traffic Policemen has become prominent. They are now appearing on the Water front, I saw a 40 minute jam, I am told that 10 yrs ago the number of trips from pier to stores have been cut in two, certainly in a few years it will be so bad something must be done.

18

With the Electric you have  $\frac{1}{2}$  the length twice the Load + twice the speed. This would greatly tend to solve the problem. I actually believe that if the price of good trucks could be got down to a cost labor material & general Expense ~~to~~ for 6 factory for 40 cents a pound that the Central Stations in the large Cities could have an all night load ~~as~~ inside of ten years greater than their present peak for lights & Motors within the City - I think it.

19

would pay you to let  
one of your young  
men come over to look  
& investigate & also  
investigate trucking

generally among the  
Merchants

I am going to put a little  
money advertising Canadian  
vehicles with the Central  
stations but my feeble effort  
will hardly make a ripple  
the stations ought to have  
demonstrating trucks &  
let Merchants try them  
out so as to convince  
them of desirability of  
doing away with horses

Now Sammy you are the one  
man in the electric field who  
is followed by the trade &  
you should do your best to  
steer the Centrals into going  
for this business. It may be  
slow but it will come as  
certain as the tides —

{

Bathory - Straker



WORKS  
ITHACA, N.Y.

FRictionless ROCKER JOINT CHAINS,  
HIGH SPEED SILENT RUNNING FLEXIBLE BEARING  
FOR POWER TRANSMISSION.

New York Office  
Hudson Terminal, 50 Church Street  
Telephone 6988 Cortlandt

F.L. MORSE, TREASURER-MANAGER.

NEW YORK, June 20, 1910.

Mr. Thos. A. Edison,  
Orange, N.J.

Dear Sir:

Since returning to the office I have looked over more carefully your letter of June 14th to the factory and find that you mention that the car mounted on 33" wheels will have an approximate speed of 350 RPM, whereas in talking with you last Friday it was my impression that you advised that the car would travel at the rate of 50 miles an hour at times which would bring the chain somewhat above 500 RPM. I probably was wrong in my understanding but before proceeding with further details I would like to be advised more definitely as to this point and also whether larger sized wheels on the car can be considered.

Very truly yours,

MORSE CHAIN CO.

*C. W. Straker*

CWF:MM

JUN 21 1910  
any?

*Say do not know how I  
made the mistake - we could  
use 40 inch wheels*

Telephone 2000 Westchester

Barclay  
National

Cable Address: Springfield

Office of

Frank J. Sprague,  
City Investing Buildings,  
165 Broadway

New York City

June 21, 1910

Mr. Thomas A. Edison,

Orange, N. J.

My dear Edison:

I have yours of June 16th.

Of course for such work as I outlined on the Southern

Pacific, which requires a continuous heavy draw bar pull for hours in succession, nothing but direct supply could fulfill the extremely arduous conditions, but the possible application which I had in mind which ought to be studied is the following:

A locomotive deriving its supply primarily from working conductors, say the third rail, but carrying a high discharge battery of fair capacity and moderate weight, so that it could move over the tracks in freight yards and the complicated lay-out of a terminal station on battery power alone, the battery to be charged directly from the third rail whenever standing on any convenient siding; the battery also to float upon the line when running, principally supplying the motors because of drop in track potential whenever starting at any distance from a sub-station, then dividing with the line, then being charged from the line whenever the track potential rose above the critical point.

*perhaps I see what you want - think it ok - when you get curves will need it to you I had to make a new type for these high discharge batteries it requires a little time*

Thos. A. Edison -- #2.

The special work in terminals and yards is costly, no matter whether overhead or third rail, but actual power used is moderate. It is quite possible that here may be an important field, but it depends, of course, largely upon the size and cost of batteries. The use proposed would probably increase the load factor of sub-stations, as well as reduce the investment there.

Very truly yours,

A handwritten signature in dark ink, appearing to be 'T. A. Edison', written over a horizontal line.

*—ONE— Railway, Electric*

DIVISION OF  
MANUFACTURES

Department of Commerce and Labor  
BUREAU OF THE CENSUS  
Washington

ELECTRIC INDUSTRIES  
T. G. MARTIN  
EXPERT SPECIAL AGENT  
125 W. 25TH STREET  
NEW YORK, N. Y.

June 25, 1910.

JUN 27 1910

T. A. Edison, Esquire,  
Edison Laboratories,  
Orange,  
N. J.



Dear Mr. Edison:

The U. S. Bureau of the Census has just issued the Street and Electric Railway Report of 1907, embodying data for the whole country of that year; while the text brings the development of the art and industry down to 1909. I have asked the office to forward you a personal copy direct, which I trust you will have received. Owing to my own share in this work, I am naturally interested in the issuance of the report, and shall be greatly obliged to receive from you anything that suggests itself to you in the way of remark, comment, or criticism that would be helpful to the office or myself in handling the data for 1912.

Believe me,

Yours truly,

*T. G. Martin*  
Expert Special Agent.

*The next report will,  
I hope, include a large  
number of storage battery  
cars*

*Lybrand, Ross Bros. & Montgomery*

CERTIFIED PUBLIC ACCOUNTANTS

(PENNSYLVANIA)

WILLIAM H. LYBRAND  
T. EDWARD ROSS  
ADAM A. ROSS  
ROBERT H. MONTGOMERY  
JOSEPH M. PUGH

*New York*

*Pittsburgh*

*Chicago*

*Philadelphia*

185 BROADWAY

UNION BANK BUILDING

FIRST NATIONAL BANK BUILDING

LAND TITLE BUILDING

New York, 30th June, 1910.

Frank L. Dyer, Esq.,

Orange,

New Jersey.

Dear Sir :

We are sending you herewith reports on our work which we have recently done for the Edison Storage Battery Company.

As mentioned to you in our telephone conversation it was our understanding that prices to be placed on all property and plant items were to be at their present value, but we found that all items of real estate, buildings, machinery, and equipment have been priced at original cost. As we understood that all losses from operation up to 28th February, 1910 were to be carried as a temporary asset which might, at some future time, be capitalized, it would seem that the omission of depreciation of machinery is defeating that purpose as it would only mean that, at some future time, the machinery and equip-

F.L.D. -2-

ment would have to be depreciated and charged against the earnings of the coming years. You will notice in our report that we have thrown all the losses from operations and experimenting, &c., into the 'adjustment' account which has been carried to the balance sheet as an asset, accompanied by an appropriate note.

We would like very much to have your views on the matter of depreciation.

Very truly yours,

WB/B

*Leland Ross Montgomery*

[FROM MILLER R. HUTCHISON]

New York City, June 30, 1910

109  
Mr. Thomas A. Edison,  
West Orange, N.J.

My dear Mr. Edison,-

I have just returned from a most interesting trip to Annapolis where I made a series of tests of submarines for the purpose of adapting my Electrical Tachometer, now adopted by the U. S. Navy.

I took down with me, Mr. Cosgrave, Editor of Everybody's Magazine, Mr. Dinkaddan, War Correspondent for the Herald and World, Mr. Johnston of the New York Herald, and several other interesting gentlemen.

We engaged in submersion tests as far down as 90 feet, torpedo practice, etc.

*crust* I am very much interested in this type of vessel for coast defence work, and considerable publicity is to be given this subject very shortly by the newspaper men I took down.

I was struck with the greatest danger now existing in submarine work, and which can be entirely obviated by your battery. The majority of accidents to submarines thus far have been due to collision and breakage of some part, thereby admitting salt water. Even a small volume of salt water gets busy with the acid in the storage batteries that are only covered over by a flimsy flooring, and asphyxiation of the entire crew, is naturally the result.

The submarine Officers state that running on the surface with hatches open is far more dangerous than diving, because of the liability of shipping asea.

*work* I am thoroughly posted in this submarine, and it occurred to me that I could be of some service to you in regard to the adapting of your battery which would, of course, overcome danger from gas.

In diving, *if* the boat goes down by the head or astern over 14 degrees, the electrolyte ~~etc~~ is now spilled from the batteries, ~~and~~ as it is a very difficult matter to keep the boat on an even keel and under water when submerged or coming up. The boat I was on tilted 12 degrees before we could stop her.

Mr. Edison

2

June 20, 1910

There is always some bilge water <sup>and</sup> ~~and~~ the keel when the acid slops over or a jar breaks, ~~and~~ there is trouble P.D.

If you would like to have <sup>me</sup> run over to discuss this matter with you, kindly drop me a line.

A large number of submarines are going to be built very shortly, and I think there is a splendid field open here for your batteries.

Yours sincerely,

GENERAL ELECTRIC COMPANY

PRINCIPAL OFFICE  
SCHENECTADY, N. Y.

In Reply Refer to

NEW YORK OFFICE, 30 CHURCH STREET  
June 30, 1910.

*M*

Mr. H. F. Miller, Secretary,  
Thomas A. Edison Laboratory,  
Orange, N. J.

JUL 1 - 1910

Dear Sir:

Complying with your request of June 29th, I am sending you under separate cover a file of bulletins covering various railway motors manufactured by this Company, also control equipment. These bulletins give general description of the various size motors as well as general dimensions.

I trust that the bulletins I am sending you will give you all the information you desire. If we can supply you with any further information, however, kindly call upon us.

Yours very truly,

*C. B. Keely*  
RAILWAY DEPARTMENT.

CBK:HV

GENERAL ELECTRIC COMPANY

PRINCIPAL OFFICE

SCHENECTADY, N. Y.

In Reply Refer to

NEW YORK OFFICE, 30 CHURCH STREET

July 1, 1910.

Mr. Thomas A. Edison,  
Orange, New Jersey.

Dear Sir:

In reference to your recent inquiry as regards the equipment for storage battery locomotive for the Erie Railroad, would advise that we give below a short summary of data on which to base the approximate size of battery required:

The service outlined we believe is too severe for any type of equipment, as the stops are too frequent and the schedule speed too high. We have, therefore, estimated upon making a schedule speed of 27 M.P.H. with 7 stops in the 26 miles; this is about equivalent to making the run in one hour instead of 52 minutes, at the same time making fewer stops. If 17 stops are made the schedule speed will be about 20 M.P.H.

In order to favor the proposition as much as possible, we are estimating upon an equipment much smaller than would be furnished with a 40 ton electric locomotive, since it will be necessary to charge the batteries at each end of the line, which will allow the motors time to cool off. The voltage of the battery proposed is not mentioned but we have assumed that it will be 500 volts.

Approximate speed time energy curve giving speed, amperes and distance is attached and shows the demand upon the battery. The weight of the battery assumed in making these calculations has been roughly estimated between 7 and 10 tons.

We have also estimated that a baggage car capable of supporting this weight and holding the proper number of cells will weight approximately 40 tons, including trucks, body and electrical equipment less storage battery and battery accessories.

A brief summary follows:

GENERAL

Locomotive proposed for Erie Railroad.  
Length of road 26 miles.  
Average grade Level.

SERVICE

Average length of run 3.75 miles.  
Duration of stops - each 30 sec.  
Schedule speed proposed 27 M.P.H.  
Maximum speed with 100 tons trailing load 40 M.P.H.

GENERAL ELECTRIC COMPANY

Maximum trailing load	100 tons
Approximate weight of locomotive exclusive of battery	40 tons
Watt hours per ton mile	56
Number of motors per locomotive	4
H.P. rating of motors, each	100
Type of control	Type II
Approx. weight of motors & control	21,000 lbs.

You may prefer using 250 V. motors. The speed time energy curve will remain the same as shown, except that the current values will be twice as great. We have no standard 250 V. motor which would be satisfactory for this work and we believe that there will be some difficulty in providing a control which will satisfactorily handle 3,000 amps. without being very expensive and considerably heavier than the 500 V. control.

These figures are submitted as a preliminary estimate for your consideration and suggestions.

The cost of a car to carry your battery and the necessary equipment to perform the above service, we estimate you should be able to buy for approximately-----\$12,000.

Our Engineers have given this battery locomotive quite a little study and have suggested that an electric locomotive could be built for the service required which would contain only the motors and control equipment, the same as the present type of electric locomotive, and that a small trailer car could be used to carry the battery. By this method, the locomotive could be kept in service practically all the time by uncoupling the trailer at the end of a run and coupling on a trailer with batteries fully charged.

If you care to go into the details of equipment of the above mentioned service further, we would be glad to arrange to have one of our engineers visit your works and go over these calculations with you.

Yours very truly,

CHIC:EV

RAILWAY DEPARTMENT.

[ATTACHMENT]

Railway Dept  
Genl Clk  
30 Church St

Your letter of July 1 read  
could not the Eric schedule  
be made by using two  
smaller cars and 8  
Motors,

Yours  
J. A. Carson

I will reply

Battery, Storage

56  
July 11, 1910.

Thomas A. Edison, Esq.,  
Laboratory.

Dear Sir:

I have carefully considered the question asked me as to whether it would be practicable to permit the Jeffrey Manufacturing Company to market an industrial locomotive equipped with your batteries under the name "Jeffrey-Edison Locomotive". I think it would be most unwise for you to permit this use of your name, because in a measure it would nullify all of our efforts made in the past to prevent the use of your name by others. No doubt if your consent in this case was given, there would be many other requests from people who use our products for permission to use your name, and it would be difficult to adequately explain why the request, if granted in one case, should not be granted in all cases. The rule that has been adopted not to permit your name to be used in connection with any enterprise except those which you control and for which you feel a personal responsibility, is a safe one to follow, and I think you would be making a great mistake if you departed from that rule.

Yours very truly,

FLD/ARK.

*Pat - Submarine*

MILLER REESE HUTCHISON  
ENGINEER  
50 CHURCH STREET  
NEW YORK

CABLE ADDRESS "HASSACON" NEW YORK

*Heavy keep  
we posted so don't  
go away & forget this  
appointment*

*Richd  
Jul 13 812  
Bring Mc Nair over  
Submarine*

New York City, July 12, 1910.

Mr. Thomas A. Edison  
West Orange, N.J.

My dear Mr. Edison,-

As a result of the Edison Battery talk I gave the Officers of the First Submarine Division in Annapolis, on June 28th, followed up by several letters from me to the proper Washington Officials, the Navy Department has ordered Lieut. McNair, in command of the First Division of Submarine Propeller, Annapolis, Md., to proceed to New York on Friday afternoon.

I quote his letter in detail.

"Cuttlefish, Annapolis, July 9, 1910.

Dear Hutch,-

Have just come from the Department. Orders will be issued this week for me to proceed to New York and study possibilities of Edison Battery for Submarine work. Am leaving for Solomon's Island Pautuxent River in half an hour for torpedo practice, and return here Friday noon. Will try to catch the Congressional Limited, leaving Baltimore at 5 p.m.

Hastily,  
Mac."

I therefore wish to make an appointment to take McNair over to your Laboratory Saturday morning.

He is a bright young man, thoroughly posted on submarine work, and quite an expert in lead batteries.

I trust that, as a result of my strenuous activity in Edison Battery behalf, I will succeed in landing them in every Department of the Army and Navy in which storage batteries are used.

I have already started the ball rolling.

Yours sincerely,

*Miller Reese Hutchison*

Battery - new road.

GENERAL ELECTRIC COMPANY

PRINCIPAL OFFICE  
SCHENECTADY, N. Y.

In Reply Refer to

NEW YORK OFFICE, 30 CHURCH STREET

July 14, 1910.

Mr. Thomas A. Edison,  
Orange, N. J.

Dear Sir:

I would acknowledge receipt of your letter of July  
12th in reference to battery locomotive for Erie Railroad  
service.

There is no question but what this service can be  
performed with two smaller cars and eight motors instead of  
large car with four motors, the principal question, of course,  
will be which is the most economical.

If you would like to discuss the engineering details  
of this proposition, I will be glad to arrange to have one of  
our engineers from Schenectady go over this matter with you.

Yours very truly,

*C. R. Keyes*  
RAILWAY DEPARTMENT.

CSH:FW

*Keyes -*

*would be pleased to have  
one of your Engineers  
from Schenectady Aug 7/10  
come over to do  
next week  
asked for copy of it*

*Will be at the  
day before he  
comes*

GENERAL ELECTRIC COMPANY

PRINCIPAL OFFICE  
SCHENECTADY, N. Y.

In Reply Refer to

NEW YORK OFFICE, 80 CHURCH STREET

July 14, 1910.

*Hester*  
Mr. H. F. Miller, Secretary,  
Thomas A. Edison Laboratory,  
Orange, N. J.

AL 15 810

Dear Sir:

I acknowledge receipt of your letter of July 9th asking for dimensions, etc., of electric driven air compressors as well as contactor boxes, rheostats, etc. I find it necessary to refer to our Schenectady Office for this information and will forward same to you at the earliest possible date.

Yours very truly,

*C. B. Key*  
RAILWAY DEPARTMENT.

CBK:W

Don't sign  
anything  
without  
asking him  
To the Mayor

Re: -

Please answer these questions  
direct send me a copy & say  
that the Mayor referred the letter  
to me & I referred it to you -  
Don't delay in answering

West Orange  
New Jersey Edison

Dear Sir;

We are about to build a <sup>city</sup> municipal  
street railroad here and we are desirous of having  
the most up to date system obtainable; in fact a  
model road. Will you kindly hand this letter to  
some one who is able to give me full information  
regarding Edison's New Storage Battery System  
which I understand is about to be installed  
in your city. Appended to this letter is a  
number of questions regarding same which  
I would like to have answered. You will  
greatly oblige and perhaps materially  
help by acceding to this request.

Very respectfully  
Robert A. Laurin

2106 O'Farrell St.

San Francisco, Cal. July 18, 1910.

P.S. Two million dollars of a bond issue have been  
voted by the people for this road. The first issue of \$250,000  
has just been sold.

### Questions

Is there any difference between the roadbed of the overhead trolley system and the Storage Battery System?

If so what is the difference?

What is the difference in operating expenses?

What is the cost and carrying <sup>seating</sup> capacity of your cars?

What is the weight of the car?

What would be the weight and price of a car with a carrying <sup>seating</sup> capacity of 40 or 50?

What speed can be attained?

For a road 7 miles long with 40 cars of a seating capacity of 50 what would be needed in the way of a power plant?

What is the weakest point of a Storage Battery System or what would most reasonable cause a breakdown?

How does the Storage Battery car compare with the trolley system car for taking grades?

Can the Storage Battery car be stopped on a grade with the same facility as the trolley system car?

Is any greater skill required in operating a Storage Battery car than a trolley system car?

Storage Battery - Subs

109

New York City, July 19, 1910.

Mr. Thomas A. Edison  
West Orange, N.J.

Dear Mr. Edison,-

Enclosed herewith data on the Edison Battery, as applied to submarines, which I have worked out as a result of the conference yesterday.

It would seem that the proper combination would be an engine of one-half the weight, gasoline or alcohol, preferably the latter, of one-half the capacity, and an Edison Battery of 1713 KW Hrs.,

A cruising radius of 540 knots would be available. This, of course, assuming that one-half the present gasoline tank capacity would furnish gasoline for 135 h.p. engine for 90 hours.

I have no data at the moment on the consumption of gasoline per h.p. hour of large marine engines, but I will call McHale's attention to this and let him alter this figure if necessary.

From present indications, I think we will have little difficulty in landing the Edison Battery on all submarines in this Navy.

Yours sincerely,

1 Mail 05-22  
Railway Dept General Electric  
Terminal Bldg reg

7-20-10

~~My~~ draughtsman would like  
to have following

Working Blue Prints of G.E.

210 B. and 210 C. Railway

Motors, also Gear Cases

giving all outside  
dimensions.

Described in Bulletin 4715\*

from General Electric Co.

Thos A E

Will sign

50 - gen  
ESTATE OF LEANDER J. MCCORMICK

8 HALL MCCORMICK, TRUSTEE  
145 LA SALLE STREET  
CHICAGO  
TELEPHONE CENTRAL 1231  
1241

PLEASE ADDRESS ALL BUSINESS CORRESPONDENCE TO THE ESTATE

Chicago, July 20, 1910.

Thomas A. Edison, Esq.,

Orange, N. J.

Dear Sir:-

We have been referred to you by Mr. Lucien Wheatly and W. W. Wheatly of Charleston, Ill., who desire to rent space in one of our buildings for the purpose of promoting the sale of Edison Storage Batteries. Any information you may feel at liberty to give as to their general character and financial responsibility will be considered strictly confidential and will be greatly appreciated by us.

Yours very truly,

Estate of L. J. McCormick,

by *Wm H. Reiche*

*Billy Bell*  
*Who is this?*  
JUL 22 1910  
Aug 7/27/10

[ATTACHMENT]

I have known of Mr. W for a number of years as manager of Street Railway. He intends to go into the selling of Electric Street RR Cars, Trunks etc. I think he has ~~some~~ a moderate amount of Capital. ~~He has~~ ~~been~~ He is spoken well of -

John  
T. H.

[ATTACHMENT]

July 26th. 1910.

Mr. Geo. Meister,  
Laboratory.

Please note the enclosed letter with Mr. Edison's  
remarks. Will you kindly have these remarks written on Mr.  
Edison's letter-head.

A handwritten signature in dark ink, appearing to be 'B. B. B.', is written over the typed text.

Ed - Irving - Hutchinson

MILLER REESE HUTCHISON  
ENGINEER  
50 CHURCH STREET  
NEW YORK

CABLE ADDRESS "MARSACON" NEW YORK

JUL 21 1913

Ans. to 1910  
July 26

New York City, July 20, 1913.

Mr. Thomas A. Edison  
West Orange, N.J.

My dear Mr. Edison,-

Referring to the data I mailed you yesterday.

In the middle of the third page, you will find  
that I stated there is a 20% loss between charging and  
discharging of Edison Battery.

I understand the loss is approximately 40%. This  
works out that it would take 32 hours to charge the battery  
with the 75 KW charging plant.

I assume this is correct. If it is not, kindly  
advise me.

Yours sincerely,

Stanton

This is correct  
battery is 40%  
Watt efficiency

*Storage Battery - Testing*

New York City, July 25, 1910.

Mr. Thomas A. Edison  
West Orange, N.J.

109

My dear Mr. Edison,-

When Mr. Hartford received the storage batteries I sold him for you, being impatient to put them to work in the absence of the ~~switch~~ board which has not yet been received, he connected all cells in series and threw them on to his generator. The voltage of the batteries was greater than that of the generator, causing reversal of polarity in the generator and a few fire works from the switch board. The fuse blew all right, but bless my soul, if he did not do the same thing again a couple of days later, putting the polarity of the generator back where it belonged, so he is right where he began. This goes to show that although your battery is pretty well fool-proof, you certainly need in connection therewith a Selective Charging Switch which will prevent the positive of the line from being connected to the negative of the batteries, and which will also protect against discharge of the batteries through the armature of the generator, or ~~through~~ the lamps, motors etc., on the circuit if the steam engine or gasoline engine lies down.

I am enclosing herewith sketch showing in diagram form, such a protection switch, which embodies the following features.

First: The charging circuit can be connected to the terminals of the vehicle or switch board irrespective of polarity.

Second: The battery can be connected to the terminals of the charging switch irrespective of polarity.

Third: When the current comes on the charging line, the fields of the little motor are energized being connected in parallel on the line. This causes the attraction of the ~~switch~~ *switch* which changes the circuit from the battery through the armature of the motor. The motor then rotates the proper direction to throw the double pole double throw switch in the proper direction to give you plus the line to ~~plus~~ the battery.

If the current goes off a double spring tension device on the shaft of the motor will automatically restore the switch to position midway between the contact points, thereby opening the circuit.

The fields of the generator being dead, the magnetic switch will go open, thereby opening the circuit from the batteries into the armatures of the motor.

If the current comes on reversed, the device would automatically select polarity and operate accordingly.

Referring to the Diagram:

July 25, 1910

A and B are the line terminals.

C and D the battery terminals.

## CONNECTION 1.

Suppose A is plus and C is plus: The fields of the motor are energized, switch L is closed, and the motor rotates in a contra-clockwise direction until knives B-F of double pole, double throw switch are forced into connection with blades G-H. The current then flows over wire 1-2-E-G-3-4-5-C- through the battery - D-6-7-H-F-8-9-B.

## SECOND CONNECTION:

Suppose A is minus and C is plus: Rotation of the armature in clock-wise direction, current then flowing from B-9-8-F-7-4-5-C- through the battery - D-6-7-K-E-2-1-A.

## CONNECTION 3:

If A is plus and C is minus: Rotation of the armature clockwise. Current flows from A-1-2-E-K-7-6-D- through the battery - C-8-4-J-F-3-9-B.

## Connection 4:

If A is minus and C is minus: Rotation of the motor contra-clockwise. Current flows from B-9-8-F-H-7-6-D- through the battery - C-4-3-G-E-2-1-A.

I am designing this switch up into four sizes, to carry 15-60-90 and 120 amperes respectively.

I expect to use the motor I am using on my Klaxon horn, wound for the proper resistance. On the end of the motor, I will locate the switch terminals and knives, so that the entire apparatus will be small and compact.

I think I will make the switch to operate in oil. The whole thing will be very compact, and could be installed in an out-of-the-way corner of electrical vehicles.

With ignition battery I was figuring on attaching directly to the socket, but upon second thought, concluded this would not do, as ten amperes would be too much to put through ordinary lamp sockets.

Several years ago I designed up an electrolytic rectifier, which I think can be used to good advantage with your ignition batteries if redesigned. As soon as I have a few moments, I will look over it and send you some data.

The ordinary automobilist is up against the alternating current proposition, and if he has something in his garage which

T.A. Edison

3

July 25, 1910.

he can use to charge his storage battery from the alternating current circuit, I think a great many of them will be sold.

Yours sincerely,

109  
New York City, July 27<sup>27</sup>, 1910.

Mr. Thomas A. Edison  
West Orange, N.J.

Dear Mr. Edison,-

I am in receipt of a letter today from Lieut. McNair, stating that he personally made a verbal and written report upon the Edison Battery to the Navy Department on the 24th instant, and which was very favorably received.

I think we will hear from that quarter very soon now.

Yours sincerely,

GENERAL ELECTRIC COMPANY

THIRD FLOOR OFFICE  
SCHENECTADY, N. Y.

In Reply Refer to

Schenectady, N. Y., July 28th, 1910.

Mr. Thomas A. Edison,  
West Orange, N. J.

Dear Sir:-

(Attention Mr. Herter)

Since our conference in Mr. Edison's office on Monday morning, I have estimated the size of motors for the storage battery locomotive proposed for the Erie Railroad. Realizing the efforts you are making to eliminate as much weight as possible in the design of the mechanical part of the locomotive I have made a special effort to obtain for you the lightest possible equipment which we believe will be satisfactory for the work required.

The motor we are recommending is a 250 volt motor which we intend to run at 500 volts. It is not a commutating pole motor, but the commutation will be very satisfactory since there will be no interruption in the supply of power such as there is with the trolley car caused by the trolley wheel partly leaving the wire when passing under hangers. We believe you will find that a commutating pole railway motor will not be required, and we are therefore recommending the GE-85-250 volt non-commutating pole motor in order to avail ourselves of about 500 pounds per motor saving in weight. This motor is also considerably cheaper than the GE-210 commutating pole on which you have been estimating.

Truck makers' diagram showing the outline of this motor, speed time energy curves and characteristic curves of the motor are enclosed. It is proposed to run these motors with ventilating covers. Also, if it is desired to increase the duty, it will be possible to devise some means of forced ventilation in order to keep the motor heating within safe temperature limits.

In regard to the control for this locomotive, we would recommend for the first locomotive one of our standard controllers which places the motors progressively in series and parallel with series resistance in circuit rather than to attempt to series parallel the batteries. In order to furnish you with a controller which would series parallel the battery we would have to develop a new controller which would take several months to deliver and would be very expensive, as new patterns, dies and drawings would be required. The details of the control could be better worked out after a trial of the equipment, and we cannot see such a great advantage between series paralleling the batteries and series paralleling the motors using resistances in series, such that the success or failure of the system as a whole will be much effected by the type of control employed. We have had very little experience with controllers which series parallel the battery, but we have used the series resistance method in a number of our storage battery propositions and find it works very well indeed.

The weight of the GE-53 motor complete with gear, gear case, pinion and axle liners is about 2800 pounds. The controllers will weigh approximately 200 pounds a piece, with control wiring, rheostats, etc., possibly 500 pounds.

Re: \_\_\_\_\_ 3.

GENERAL ELECTRIC COMPANY

If you desire quotation on our standard controllers we will quote you on 2-K-34 controllers suitable for controlling 4- 75 HP motors.

Hoping that this information will be of assistance to you in laying out your locomotive, I am/

Yours very truly,



Railway & Traction Eng. Dept.

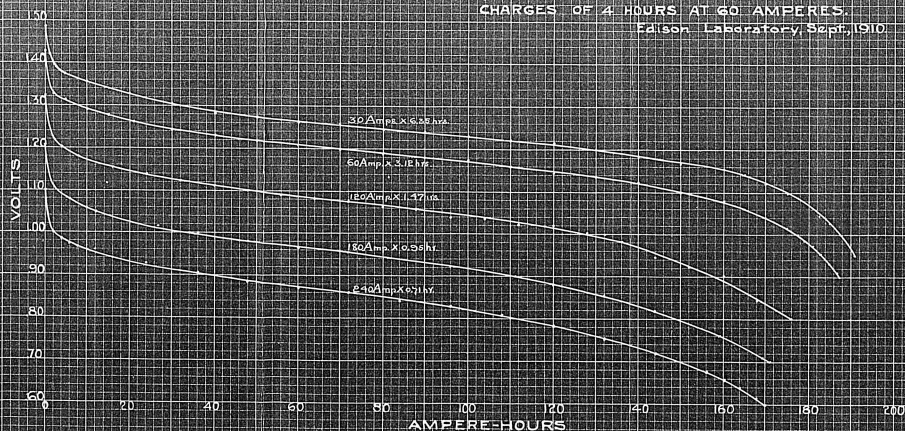
ECK/cw

CURVE 38

Disch. Rate Amps.	Average Voltage	Output Amps.	Hours	Rate of Disch. Volts	Output Watts
2.40	0.840	170.0	142.3	3.90	9.85
1.80	0.935	171.0	160.0	1.61	11.03
1.20	0.959	176.0	185.7	3.73	12.80
.60	1.182	187.3	221.5	4.89	15.27
.30	1.335	190.5	355.4	8.55	16.22

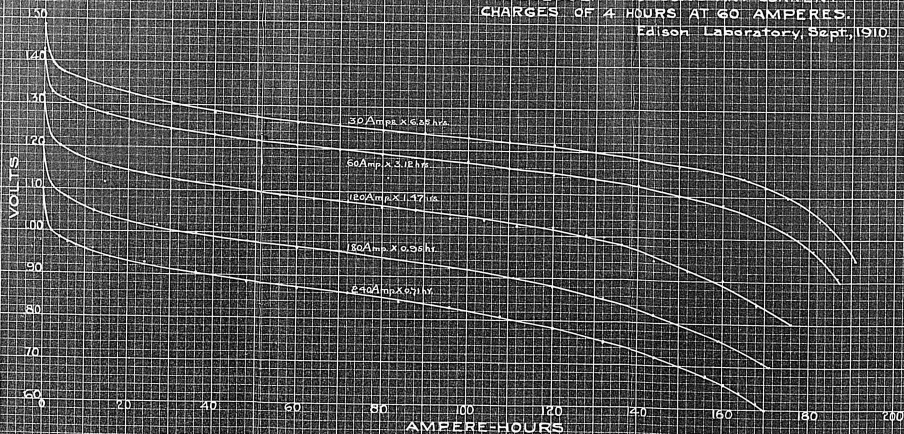
EDISON STORAGE BATTERY.  
PRELIMINARY TEST OF SPECIAL CELL NO. 6  
HAVING 8 POSITIVE PLATES OF 4-INCH TUBES,  
AND 9 IRON PLATES, IN AN A-4 CAN.  
WEIGHT OF COMPLETE CELL, 14.5 POUNDS.  
DISCHARGES AT DIFFERENT RATES  
SUBSEQUENT TO CONSTANT-CURRENT  
CHARGES OF 4 HOURS AT 60 AMPERES.

Edison Laboratory, Sept., 1910.



CURVE 3B

Disch. Rate Amps.	Average Voltage	Output Ampere Hours	Eff. Watts	Rate Volts Hour	Output Watts
240	0.840	170.0	127.8	3.90	9.85
180	0.935	171.0	160.0	1.61	11.03
120	0.955	176.0	185.7	8.75	12.80
60	1.182	187.3	221.5	4.89	15.27
30	1.335	190.5	255.4	6.55	16.22



EDISON STORAGE BATTERY  
 PRELIMINARY TEST OF SPECIAL CELL NO 6  
 HAVING 8 POSITIVE PLATES OF 3-INCH TUBES,  
 AND 8 IRON PLATES IN AN A-4 CAN.  
 WEIGHT OF COMPLETE CELL, 14.5 POUNDS.  
 DISCHARGES AT DIFFERENT RATES  
 SUBSEQUENT TO CONSTANT-CURRENT  
 CHARGES OF 4 HOURS AT 60 AMPERES.

Edison Laboratory, Sept., 1910

*Encl. Address "Edison, New York."*

*From the Laboratory  
of  
Thomas A. Edison,*

*Orange, N.J.* August 3rd 10.

M. R. Hutchison, Esq.,  
50 Church Street,  
New York City.

Dear Sir:

Enclosed herewith find newspaper clipping  
regarding the submarine Cuttlefish, with Mr. Edison's  
notation thereon, as follows:

"Why did the batteries run out?"

Kindly give the same the attention you deem  
necessary and oblige,

Yours very truly,

*H. J. Miller*  
Secretary.

*myd. Sub*  
*J*

1, VICTORIA STREET,  
S.W.

NIXON & MANNOCK,  
ENGINEERS.

Telephone No. WESTMINSTER 610.  
FPM/J..

*16. H. Miller*  
*Laboratory*

*London*  
4th August, 1910. 19

Thomas A. Edison, Esq.,  
The Laboratories,  
New York.



Dear Sir,

Some months ago, we had the pleasure of corresponding with you respecting the British representation of your Electric Accumulators, for which, unfortunately, we were too late, as you had already settled this business.

As we are very desirous of handling some recent American invention, which in consequence, of our influence with the Government, and our connections with almost every branch of Commercial Engineering, we are peculiarly fitted to introduce, we feel that we are justified in reminding you of our existence.

If you, or your friends, have anything which you think might interest us, may we ask you to bear this firm in mind?

Yours faithfully,

NIXON & MANNOCK,

*F. H. Nixon*

*The US Govt are specifying our new Gallons  
for their machinery, on account of reliability  
greater radius of action and no acids  
other governments have them on test at  
Naval Stations, perhaps you could do some  
GOV*

Business with the govt in this line for  
Submarines, the American Storage Battery  
Co supplying the outfit, of course  
we could not ship batteries into  
England without destroying our  
patent but in the case of the  
British govt ordering them a special  
permit could probably be obtained  
so our patents would not be  
jeopardized. It will be some time  
before a Mfg Co will be put in  
operation in England on account  
of small number of Electric  
Vehicles in use. If you care to do  
anything in the Submarine Line  
we'll be happy to correspond further.  
Yours truly  
J. C. Edison

New York City, August 4, 1910  
109

Mr. Thomas A. Edison  
West Orange, N.J.

Dear Mr. Edison,-

I notice the account of the CUTLERISH accident, and have taken up the matter with the view of determining as to just what did happen.

I can see how the running out of the batteries would not affect the ability of the boat to come in on her own power, as she uses a gas engine exclusively on surface.

The chances are, something else happened and, for reasons which you and I can best understand, the blame was laid on the batteries.

These submarine boys are dead crazy to get Edison Batteries on the boats, and I think we can expect very unsatisfactory performances of the lead cells from now on.

You cannot well blame them when they are taking their lives in their hands every time they make a dive owing to the constant dread of chlorine gas. It is the only thing on the boat they do fear.

I expect to hear from McNair shortly as to the real cause, and will let you know. I am doing a good deal of inside work which I think will prove productive of results very shortly.

If you receive any more visits from the Electric Boat Co. or the Lake Company, suggest your telephoning me so that I can be present at the interview.

I am now in position to talk intelligently on this matter having made a study of it of late, and if there is anything you want to know, I think I can furnish the information promptly.

I am at work on the Automatic Charging Switch, and hope to have something to show you very soon.

Yours sincerely,

Battery  
Ideas

Ans. 8/17/10

NELSON GOODYEAR, INC.  
80 CHURCH STREET  
NEW YORK

TELEPHONE  
CORTLANDT 6450

ROOM  
1851

August 16th, 1910.

Thomas A. Edison, Esq.,

Edison Manufacturing Company

Orange, New Jersey.

*Will be happy to help you  
out in any way I can by  
suggesting upon your  
come soon any time -*

Dear Sir:--

Since I saw you the other day in reference to the  
lighting of buoys by wireless, I have been thinking over your  
remarks concerning the use of a sound producing device similar  
to the Klaxon horn as a fog signal. *Think wave motion can be  
made to charge battery  
if battery is large enough  
to carry over calm*  
At one time, about  
a year ago, I saw a man in the Metropolitan Life Building who  
claimed to have invented the Klaxon horn, and we had some con-  
versation about using it, but at that time there seemed no way  
to get the power without a good deal of complication, nor did he  
have any helpful suggestions regarding the acoustics of the pro-  
per horn, etc.

Your new storage battery seems to be a way out of the  
difficulty, and I believe that I will have no difficulty in  
getting the Government to take this up if we can produce a  
satisfactory sound producing device, but as you suggested, it  
must be of a type to wake the dead. At best, the present  
sound signals which are used, i.e., the bells and fog whistles  
actuated by wave compression on the old Courtney principle, do  
not carry very well, especially to windward or in a calm.

Now, when a vessel is on a lee shore, a device that does not

carry to windward is almost useless.

Some of the worst fogs

NELSON GOODYEAR INC.

August 16th, 1910.

Thomas A. Edison, Esq., #2.

and the greatest of shipping hazards occur in calms in crowded port entrances like New York's Lower Bay, and under those conditions a wave actuated whistle is quiet. Another important advantage of the electrically driven Klaxon siren would be, that we could give it definite characteristics, a feature which is very urgently needed, as you will appreciate. When a vessel is coming in on dead reckoning, she may know her approximate location, but almost never knows it exactly, and as these buoys will be used in great numbers, it is not only desirable that their light has definite characteristics, that is, so many seconds light and so many seconds dark, alternated perhaps with different colored screens, or different numbers of flashes, but they should be distinguished by different sound characteristics, i.e., a long and a short blast, or two short blasts, etc., up to a number which would serve for buoys, perhaps for 100 miles, when the system could start over in the reverse order so that from <sup>the</sup> characteristic to <sup>the</sup> characteristic there would be a distance of say 200 miles, or whatever the lighthouse men think advisable.

This buoy business which I started a couple of years ago has proven most interesting, and presents a great many very fascinating problems, and I have wondered if I could not get your interest to the extent of your assisting us with some of the electric problems which are out of our line, particularly as it would seem that your battery would be the biggest step toward the solution of the problems. The buoy shown in the enclosed cut, carrying 3500 lbs. of carbide will burn about nine months; the small one about six months without any attention whatever.

NELSON GOODYEAR INC.

August 16<sup>th</sup>, 1910.

Thomas A. Edison, Esq., #3.

By floating a storage battery on the line, would it not be possible to get a wave actuated electric generator which would keep the battery charged, or would it be simpler and more practical to use a large enough battery to last the entire period?

I trust you will pardon the length of this letter, but I assure you we can do a very large volume of business if we can work out a powerful sound signal, and the importance of the undertaking seems to me to warrant my writing you at such length.

I hope to have a revolving apparatus to represent the weight of a revolving flashlight at your factory in due course, as this is also an extremely important thing for stationary or shore aids.

Yoursvery truly,

A handwritten signature in cursive script, reading "Nelson Goodyear". The signature is written in dark ink and is positioned below the typed name "Nelson Goodyear".

Dic. N.G.---R.

*B.M.R.*

GENERAL ELECTRIC COMPANY

PRINCIPAL OFFICE  
SCHENECTADY, N. Y.

In Reply Refer to

70  
60  
50  
40  
30  
20  
10

NEW YORK OFFICE, 30 CHURCH STREET

Aug. 24, 1910

*Aug 26 - 1910*  
*Aug*  
Thomas A. Edison Esq.,

Orange, N.J.

Dear Mr. Edison:-

*Day all night*  
*E*

Referring to our recent interviews and the desire which you then expressed to meet a couple of able steam railway men who were experienced in railroad engineering practice and traffic conditions, would say that if agreeable to you I shall be glad to bring over Mr. A.R. Whaley, Assistant General Manager of the New York Central, and Mr. B.F. Wood, Assistant Chief Engineer of the Pennsylvania Railroad, to meet you next Monday afternoon.

I have already talked over this matter with Mr. Beach who has kindly arranged to bring us out in his auto. Should this particular date not be entirely convenient for you, shall be glad to make the call at some other time.

With kindest regards,

Most sincerely yours,

*J. M. Rank*

Batter, England

CONTRACTORS TO H.M. OFFICE OF WORKS. ON ADMIRALTY AND WAR OFFICE LISTS.

NIXON & MANNOCK,  
ENGINEERS.

1, VICTORIA STREET,  
S.W.

3rd September, 1910.

Telephone No.—WESTMINSTER 6107.

FHN/J.

(Also at FINSBURY PAVEMENT HOUSE, E.C.)

Thos. Edison, Esq.,  
The Laboratory,  
New York.

Dear Sir:

*Send the battery  
fully patented in England, but I  
understand if I ship any to England  
it will make them presently.*

We are much obliged to you for your favour of the 15th ultimo, and in reply beg to say that with regard to the question of the British Government taking up your batteries for the propulsion of submarines, we gather from your letter that you do not at present wish your invention to be published as a Patent Specification, or in any other way in this country.

We take it that you have, either not yet applied for a Patent in the U.S.A., or that if so, you do not intend applying in this country until your U.S. Patents are ready for allowance. There is, however, no risk run of publication even if a Patent is applied for in this country.

In cases where the Government is to be approached, the course adopted is for the inventor, whether a subject of this country or not, to apply for a Patent in Great Britain in the ordinary way, just before the invention is submitted to the Government. Immediately the Government takes the invention under consideration, the inventor applies for his Patent to be made a secret Patent, in which case the Patent is not printed when accepted, and the invention is not published in any way, and its secret is carefully guarded by the Government themselves.

In addition, the Specifications of such inventions are not examined by the ordinary examiners, but go to a special department of the British Patent Office, so that there is no possibility of anything leaking out. In the event, however, of the Government not taking up the invention, (which we trust in this case would be unlikely), the Patent may simply be dropped, if no publication is desired, and then the invention never becomes printed as a specification, and nothing consequently can ever become known about it, unless the inventor

NIXON & MANNOCK.

To Thos. Edison, Esq., ..... Page 2 ..... Date 3.9.10.


chooses to make the matter public himself. To drop a Patent, does not hinder the application for a fresh Patent for the same matter at a later date.

We hope that you will decide to take out a British Patent, and let us introduce the battery to the Admiralty, which, as we have said before, we are in a favourable position to do, and we shall be pleased to hear what arrangements you are prepared to make with us in connection with this business.

We are quite aware of what the Admiralty are doing with respect to Accumulators for Submarines, and are of the opinion that your invention should be placed before them at the earliest possible date.

Yours faithfully,

FOR & ON BEHALF OF NIXON & MANNOCK.

*Fred. H. Mann.*  


New York City, September 3, 1910.

Mr. Thomas A. Edison

Frontenac, N.Y

My dear Mr. Edison,-

A representative of the Lake Torpedo Boat Co. called this morning to discuss the battery matter, having gotten wind of it from Lieut. Ellyson.

He asked for and received from me, a copy of the report I handed in, compiled from conversation between Ellyson, McNair, Warren and ourselves, in your Laboratory in July. He states frankly that the lead cell is totally inadequate, and was much impressed by the discharge curve #36, dated September 1910, forwarded to me by Mr. Bee yesterday.

The Lake Company are building and expect to have ready for the water within two months, a boat for demonstration purposes.

They seem inclined to offer the use of this boat to try out a practical submarine battery equipment.

I explained that I could see no reason why the Edison Battery Company should expend a large amount of money to equip a boat, when a practical test could be conducted on a few cells in the Government Experiment Station.

I told the representative, however, I would put this matter up to you for your consideration.

I expect Ellyson down this afternoon to spend Sunday with me, and will advise you if I succeed in getting any further information of value.

I am expecting Mr. Lake to call on me next week for the purpose of discussing the matter of refinancing his company and placing it on a satisfactory basis, both from the standpoint of sufficient working capital and influence at Washington. Will advise you further in this connection.

I hope you are having a pleasant time.

Yours sincerely,

Battery -  
Commutator

Sept. 8th, 1910.

Mr. Edison:-

MOTOR RECTIFIER.

I have made a preliminary run with the small single commutator rectifier on a 60-volt battery. There was no difficulty in maintaining synchronous speed or securing a steady charging current, but I have found the following effects due to the high voltage of the battery which did not show up on the small test cells.

BRUSHES.

It is not practicable to use soft carbon brushes under the above conditions. The commutator seems to get coated very quickly with an imperceptible film of high resistance, but unstable in character. For instance: with the battery switch off and running free the voltmeter will show at first 60 or 70 volts; within a few minutes this will drop possibly as low as 40 volts at times; though when the battery switch is closed and the charging current is passing the voltage immediately arises to 65 and remains steady. The effect, however, of this coating on the commutator is to render it liable to flash over in operation. It is not so marked if the carbon brush is connected to the negative terminal of the battery.

I find the best results so far by using a composite brush recently put on the market by the National Carbon Co., and composed largely of finely divided copper with a small percentage of graphite or carbon. This is much more stable in operation and does not show the same tendency to flash as with carbon.

This first commutator was intentionally made with the active segments embracing an arc of  $45^\circ$  so as to take in the whole wave of alternation. I believe, however, it will be better to make this

(Page 22)

active segment narrower, as shown in sketch, Fig. 1; the width of this active segment to be governed by the voltage of the battery to be charged. For example: if the battery voltage is 60, as shown in Fig. 1, the active segment should be relatively of the width shown in "B", so that contact will be made and broken nearer the zero point, or balance~~ing~~ voltage of the charging wave and battery.

As I have already stated, I believe it will be advisable to use two short rectifying commutators, in series, on the plan in Fig. 2; so that we will have four gaps in series at the point of breaking the circuit, and the total gap will be made at a rate four times as great as the speed of the alternation or current wave.

I have written a description and made sketches, complete, for Mr. Lewis of the Legal Dept. so as to prepare patent application covering the above points and also some other details.

D. M. Bliss

[ENCLOSURE]

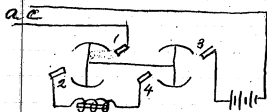
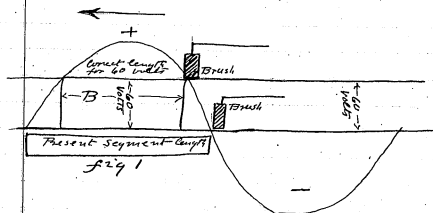


fig 2  
4 gaps in series

Stub

Battery, Storage

1524  
Sept. 12, 1910.

Mr. Bee:

Referring to the attached letter from The Rauch & Lang Carriage Company at Cleveland, this seems to have been overlooked, so I wish you would give me the necessary data right away in order that I may be able to answer it.

What about the amount of attention the battery requires and the cost incurred in charging? How do these compare with the lead batteries?

What about the effect of the battery solution on the varnish of the car?

They refer in their letter to the guarantee we have given them in the past. What guarantee was this?

I was under the impression that the battery the Howman Company had, had been returned to Rauch & Lang. Do you know whether this is so or not?

Let me have the necessary data as to the mileage of pleasure cars that they want.

I want this information right away so that I can answer their letter.

F. L. D.

F.L.D.MK.

[ATTACHMENT]

*Battery, St.*  
**THE RAUCH & LANG CARRIAGE CO.**

CHARLES RAUCH, President  
CHARLES F. WICKERLY, Vice President  
CHARLES C. LANG, Secretary

MANUFACTURERS OF

*Rauch & Lang  
Electrics*

ESTABLISHED 1883.  
Sole Office  
PAID BY THE MANUFACTURER  
SALESPERSON  
RECEIVED  
NEW HELLER & BROS.

CLEVELAND, OHIO.

June 1st, 1910.

Edison Storage Battery Co.,  
ORANGE, N. J.

Gentlemen:-

We have before us a copy of the Detroit Journal of May 28th, 1910 containing an ad. of the Anderson Company with a guarantee over its president's signature of 50,000 miles service with a drop in battery capacity per charge of less than ten percent in the A-6 battery provided the solution be renewed once a year.

He makes a further guarantee that if the vehicle is kept in one of that Company's garages and fails within twelve months to keep up its rated capacity, they will replace it with a lead battery, refund the difference in cost of the two, thus making no charge for the mileage obtained from the Edison battery to date.

This guarantee we think must certainly be influenced to a certain degree by what you are willing to do for the vehicle manufacturer. One of our agents has one of your 40 cell A-6 batteries in service now and if we know just how far we can go in guaranteeing the battery we would be in better shape to do our share of the business.

Very truly yours,

THE RAUCH & LANG CARRIAGE CO.

JHH-L

*John A. Hertzner*

[ATTACHMENT]

Battery, St.

June 7, 1910.

1524

The Rauch & Lang Carriage Co.,  
Cleveland, Ohio.

Gentlemen:

Your favor of the 1st inst. has been received, and in reply I beg to advise you that the guarantee of the Edison storage battery by the President of the Anderson Carriage Co. is based entirely on his own responsibility and was in no degree influenced by ourselves. We might say, however, that where the Edison battery is taken care of in a proper garage and the instructions for its up-keep are observed with reasonable care we think from our own tests and experience that this guarantee is perfectly safe. We do not make such a guarantee ourselves because after the battery leaves our factory we have practically no control over it, but in the case of a manufacturer maintaining an up-to-date garage we believe that such a guarantee can be safely made.

Yours very truly,

FLD/IWW

Vice-President.

Return to Churchill!

REFER TO THIS NUMBER  
IN YOUR REPLY

1801

245

MEMORANDUM

FRANK L. DYER,  
ORANGE, N. J.

Batteries Storage

Sept. 15, 1910.

Mr. Bee:-

Replying to your memorandum of the 12th inst. I wish you would answer the letter from C. B. Haynes & Company of Richmond, Va., and tell them that we will let them handle the Edison ignition battery along the lines you suggest. Make it perfectly clear to them that we will give them protection so long as we are satisfied that they doing the business properly. Any orders in their territory will be referred to them.

F. L. D.

F.L.D.ARK.

MILLER REESE HUTCHISON  
ENGINEER  
80 CHURCH STREET  
NEW YORK  
CABLE ADDRESS "HASSACON" NEW YORK

New York City, Sept. 21, 1910.

Mr. Thomas A. Edison  
Edison Storage Battery Co.  
Orange, N.J.

SEP 23 1910

My dear Mr. Edison,-

Herewith please find blue print of sketch showing  
Principal Dimensions of Storage Battery Tank for U. S.  
Submarine Torpedo Boats -

VIPER  
CUTTLEFISH  
TARANTULA

Kindly keep this sketch covered up on your desk,  
as it would not do for any battery people to see this.

These plans are all exceedingly hard to get hold  
of, and it could not be done very well if the Bureau had not  
been instructed by the General Board several years ago to  
give me any blue prints I may call for, to be used by me  
solely in original work, and be treated as confidential.

I have just returned from a trip West, and have  
several interesting things to talk over with you regarding  
batteries. Will try to get out the latter part of the week.

Yours sincerely,

*M. Reese Hutchison*

Friends

Aug 9/30

MILLER REESE HUTCHISON  
ENGINEER  
50 CHURCH STREET  
NEW YORK

CABLE ADDRESS "MAGNACON" NEW YORK

Could ship to England without  
Killing patent but undoubtedly  
could to the Government

9/24/10

Dear Mr Edison,

The gentlemen enjoyed the trip through the  
lab. & battery works very much. They are all  
very intelligent men & it was a pleasure to  
talk with & show them.

They are much interested in the battery  
and want to call it to the attention of the  
British Admiralty as soon as they return.

As I mentioned it for all supposed to  
defn value of battery in England until  
a certain limit classes, because of patent  
situation. Just when will you be ready?

Of course it is a rather formidable  
question, but about what price, roughly,  
do you figure the submarine battery  
equipment, exclusion of installation &  
trays, will run? I need this rough  
figure in talking with a South American  
country with whom I may contract to  
supply several submarines.

Sincerely  
Hutch.

MILLER REESE HUTCHISON  
ENGINEER  
80 CHURCH STREET  
NEW YORK  
CABLE ADDRESS "HASSACON" NEW YORK

9/24/10.

Here is some interesting reading.  
Krip in & will get it some day  
when I am in -

Hutch

REFER TO THIS NUMBER  
IN YOUR REPLY

1535

Battery, St.

FRANK L. DYER,  
GRANGE, N. J.

# MEMORANDUM

October 4th, 1910.

472  
Mr. Smith:-

Replying to your memorandum of September 12th, I have discussed the question with Mr. Edison as to the expense of using bismuth in the nickel pockets. As I understand from him, the swelling when nickel alone is used is very great, and that when bismuth is employed the swelling is somewhat reduced, but even with the mixture of the two materials the swelling is so great that flat pockets cannot be used. Hence, the employment of tubular pockets is necessary. I do not know whether under these circumstances it will be worth while to apply for a Canadian patent on the tubular pockets using a mixture of nickel and bismuth, but since the examinations at Ottawa are not very close, it might be worth our while to make the attempt. If you conclude that this ought not to be done, let me know, and I will discuss the matter with you.

F. L. D.

FLD/ARK

M. E. THORNTON, President.

Mrs. F. C. THORNTON, Treasurer.

## Thornton Light and Power Company,

Z. M. McGUILIARD, SUPT. AND CHIEF ELECTRICIAN.

Hickory, N. C., Oct 10, 1910

Thomas A. Edison,

Westfield,

Mass., U. S.

Recd Aug  
10/10

Dear Sir:

I want one of the first of your new Edison storage cars.  
In 1910, I think, we negotiate something with a bank.

Please send me the particulars of the car with price \$1,000.

It looks very nice and the kind of work plants really prints on  
all signs. I don't see much more to be done on it, but I don't  
know what to do with it.

Sincerely yours,

M. E. Thornton.

Please advise me when you can.

Will you also please advise me when is the next regular outfit  
for charging the batteries and for automobiles and where I can get it?

~~The car was designed by Arthur Field, the inventor~~

You better want a little while the car  
is not of my design I only recommended the  
New Storage battery. I want to be  
assured that it is going to be a permanent  
one even as a car before I will be willing to

MOUNTAIN HOME CLUB  
EDGEMONT, N. C.

ARMY AND NAVY CLUB  
NEW YORK


M. E. THORNTON  
HICKORY, N. C.

PRESIDENT  
THORNTON LIGHT & POWER CO.  
PRESIDENT  
WATER-POWER ELECTRIC CO.

PRESIDENT  
HICKORY RAILWAY CO.

to recommend it; there ~~was~~ is another  
Engineer developing a car which  
will soon be ready.

Regarding the best receiver  
for 30 or 40 channels the Mercury  
Receiver is the best, but  
~~this~~ There is a wonder receiver coming  
out which is more simple &  
costs very much less.

 J. E. ...

October 19, 1910.

Mr. Thomas A. Edison,  
Edison Storage Battery Co.,  
Orange, N. J.

My dear Mr. Edison,-

Enclosed herewith please find letter from  
Lieutenant Howe with specifications for storage batteries for  
gun firing and sight lighting.

I am enclosing copy of my letter to  
Lieutenant Commander Upham.

If you have a few moments I wish you  
would read these specifications so as to become familiar with  
them and I will discuss the matter with you as soon as I hear  
from Mr. Upham.

Yours sincerely,

[ATTACHMENT]

IN REPLY ADDRESS  
THE SECRETARY OF THE NAVY,  
AND REFER TO NO.

NAVY DEPARTMENT.  
WASHINGTON,

October 18, 1910.

My dear Mr. Hutchison:-

I regret very much this delay in answering your letter regarding the requirements of marine storage batteries, but the delay was caused by rush of work in the office which prevented me getting around to get the specifications; and again, by the absence of the officer who has charge of this when an effort was made to get the same.

The Navy is interested greatly in improved storage batteries, and I trust that your efforts to improve the quality and diminish the weight of the marine storage batteries will be a success.

These specifications I think will give you a sufficient guide as to the character of storage battery desired.

Any further questions on this matter had better be taken up with Lieutenant-Commander F.B. Upham, U.S.N., who has the direct charge of this work in the Bureau of Ordnance.

Wishing you all success, I am,

Yours sincerely,

Alfred Howe  
Lieut., U.S.N.

Form 1

# THE WESTERN UNION TELEGRAPH COMPANY

25,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD

THIS COMPANY TRANSMITS AND DELIVERS messages only on conditions limiting its liability, which have been accepted to by the sender of the following messages. Transmission or delivery of Uninsured Messages, beyond the amount of tolls paid thereon, nor in any case beyond the sum of Fifty Dollars, in which, unless otherwise stated below, the message has been valued by the sender thereof. It is not to be taken as a contract or agreement in writing, which only apply after the message is filed with the Company for transmission. This is an UNINSURED MESSAGE, and is delivered by request of the sender, under the conditions stated above.

ROBERT C. CLOWRY, PRESIDENT

BELVIDERE BROOKS, GENERAL MANAGER

NUMBER 23 SENT BY REC'D BY 5 M X OCT 23 CHECK 230P

RECEIVED AT 230 Main St., Chicago, Ill. Telephone 90, Always C. L. P. Oct 25 1917

DATED Chicago Ills 24

TO Thomas A. Edison

Edison's Laboratory, Orange, N. J.

I want to buy Batteries

for an Express wagon ramp

as those being supplied by

Sanderson and shall probably follow

this with a number of

Form 1

# THE WESTERN UNION TELEGRAPH COMPANY

25,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD

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ROBERT C. CLOWRY, PRESIDENT

BELVIDERE BROOKS, GENERAL MANAGER

NUMBER SENT BY REC'D BY 2 CHECK 230P

230 Main St., Chicago, Ill. Telephone 90, Always C. L. P. 1917

RECEIVED AT 230 Main St., Chicago, Ill. Telephone 90, Always C. L. P. 1917

DATED

TO other orders as I expect

to put out a great

many Electric Vehicles is there

any means of my getting

better prices than these

quoted by Chicago office of

your Battery Company Samure Insull

MILLER REESE HUTCHISON  
ENGINEER  
50 CHURCH STREET  
NEW YORK

CABLE ADDRESS "HASSBACH" NEW YORK

Hutchinson

We have a fine compound  
already <sup>October 24, 1910.</sup> testing it out  
in several trucks, it don't  
crack after at 135° or Crack  
Need ydure below  
10 degrees below  
Zero. I would  
like 2 or 3 lbs

Mr. Thomas A. Edison,

Orange, N. J.

My dear Mr. Edison,-

I have been very much interested for the  
past two years in quite a remarkable compound called Voltax.  
The Pennsylvania Railroad is using it exclusively in painting  
steel bridges and other metal work. It seems to absolutely  
prevent rusting, is an excellent insulator, will stand variations  
in temperature, alkali solution etc.

It occurred to me it might be a good plan to  
try this compound on the battery jars instead of the grease.  
If you can heat the jar to about 135 degrees and immerse in  
Voltax of the same temperature, the resultant thin coating would,  
I think, prove valuable from rust proof and insulating standpoints.

I am asking the Voltax people to send you  
a gallon of this compound in case you desire to test it out.

Yours sincerely

M. R. Hutchinson

Beach,

Ans.  
+ Copy of this  
letter sent to  
PMB Beach to be forwarded  
when he furnished same

Ans 11/1/10

You see what they are after  
after reading them it is over to

Field

Oklahoma City, Oklahoma,

October 25, 1910.

Mr. Thomas A. Edison,

Orange, N. J.

Dear Sir:--

The Citizens Traction Company of Oklahoma City is a corporation having in operation a street car line from the city limits to a large city park four miles therefrom. The company is desirous of entering the city either upon a regularly constructed electric trolley line or by making connections with some sort of an auto bus line.

The officers of the company have been noticing from time to time that your batteries have been used in connection with a street car for paved streets without track and trolley, and are desirous of gaining all the information they can upon this subject as to cost of installation and other matters that might be of interest under the circumstances.

We have had some correspondence with the Beach Electric Car Company, but we are particularly interested in the trackless and trolleyless side of the question, so that a car could be operated from the end of our line into the heart of the city and around the business section on paved streets.

- 2 -

We would be under obligations to you for sending us such literature as you may have on hand in regard to this matter.

Respectfully yours,

CITIZENS TRACTION COMPANY,

By

W. F. Hearn

Vice President.

P. O. Box 573.

[ATTACHMENT]

B.S. secret car

Sir -

The ~~Rolls~~ Trallykar Car, was  
designed by Mr E J Field an  
Engineer, of N York

I have tested it somewhat  
it seats 28 people + while it  
is not a beauty, it is a very  
husky car + ~~is~~ very  
practical. It made a run  
from NY to Atlanta City  
135 miles + back 150 miles  
without any trouble speed  
about 10 miles an hour  
I have referred your letter to  
Mr Field. The only connection  
I have with it is to furnish  
the new storage battery

2

send in letter  
to Bosch

THE UNIVERSITY OF ILLINOIS  
S. C. CLARK, Instructor in Chemistry

Washington, D. C., Oct. 28, 1910.

Mr. Thomas A. Edison,  
West Orange, N. J.

My dear Mr. Edison:-

In case the nature of this communication is not of interest to you personally, please be so good as to refer it to the corporation, or the persons, who are concerned with the development of the "Trackless storage battery car," which is, according to the Sci. Amer. for Oct. 22, 1910, page 311, middle column, paragraph 6, "Another step in the evolution of suburban travel."

When we came here about a year ago to accept a position on the scientific staff of the Department of Agriculture, our family decided, in accordance with the advice of many of our colleagues, to try living in the suburbs. The retrospect of our childhood on the farm has, for a number of years, caused my wife and myself to long for an opportunity to give our children also the benefit of the happiness and training for usefulness that generally results from life on a farm. Accordingly, we spent considerable time, as much as we could for several months, viewing the various suburban possibilities about Washington and finally we chose a place a little off the usual beaten paths of suburban travel. This we did for several reasons among which are the following:

1. The region, located on the wooded hills overlooking the Potomac, is one of great natural beauty and picturesqueness and the soil, as evidenced by occasional well kept fields and orchards, seems to respond generously to intelligent treatment. The location is almost ideally adapted to the needs of a suburban village; provided adequate means of communication with the city could be arranged.

2. The Chain bridge crosses the Potomac at a distance of about 5-1/2 mi. from the centers of business and departmental activity. It lies at the end of the excellent Canal Road, which affords easy access to the city and its superb streets. The old Georgetown and Leesburg "Pike" starts on the Virginia side of this bridge and runs up the river hills toward Langley, Fairfax co., Va. Glen Dale, our little patch of 20 A., is about 1-1/2 mi. from the Chain bridge. This road for this distance is exceedingly rough and difficult, although the bed of the "Pike" is good and very durable and strong. The road is much in need of resurfacing and repair. It is, however, passable at all seasons of the year. An automobile should be able to make the bridge from the city in 20 min. and the climb up the hill to Langley (3 mi.) in an equal period or less.

3. The prices of land along the "Pike" have not as yet been inflated by realty operators and there is chance for a cooperative community to be formed.

Hence you see my deep interest in the article mentioned above. Please send full particulars concerning the car and your estimate of its adaptability to our conditions. It is possible that we might arrange to try out a car as the Edison-Beach car was tried out on a surface line in New York recently. The nearest electrical current is at the Chain Bridge and the nearest "trolley" about 1/4 mi. beyond, also up a hill and somewhat difficult to reach.

It seems to us that there could hardly be better conditions, than these, for proving the merits of a "Trackless storage battery car."

Very sincerely yours,

S. C. Clark.

Office  
Address

RECEIVED BY THE UNIVERSITY OF ILLINOIS  
S. C. CLARK, Instructor in Chemistry  
Office of Scientific Studies  
Department of Agriculture  
Washington, D. C.

[ATTACHMENT]

PN - American

Say the Car you speak of was  
designed by an Engineer named  
C J Field. I furnished the  
batteries - It seems to be a  
pretty good Car although it  
is not very handsome, it seats  
28 persons ~~at~~ <sup>for</sup> a speed  
of 10 miles. It ran from NY  
to Atlantic City then to Phila  
back to NY ~~without~~ <sup>without</sup> at all  
the small lions. It is very  
simple & would work on the  
old Fishing Turnpike, etc  
which I have travelled  
It is very economical to  
operate. I think the price is  
\$6000, Address of Mr Field  
is Hardy gives  
the address William

TELEPHONE CALL-15 QUINCY.  
CABLE ADDRESS-"SPEARBOAT,QUINCY"

HOLLAND TORPEDO BOAT COMPANY.

ELECTRIC BOAT COMPANY.

REFER TO NO.

QUINCY, MASS. Nov. 2nd, 1910.

SUBJECT

Mr. Thomas A. Edison,

Orange, N.J.

Dear Sir:

In accordance with your letter of Aug. 31st, I had expected to hear from you last month with reference to the matter of submarine batteries, but so far I have heard nothing. I beg to call your attention to the matter and trust that you will be able to take it up at an early date. As submarine orders are separated by periods running from a year to a year and a half, a few months delay in preliminary work involves over a year's delay in results.

In connection with the matter, I am enclosing you copy of the results of the tests made here on five cells, Type B-4. If the results obtained here are abnormal, I should be very glad to have your views in explanation of the matter.

I have in hand now for certain European countries two different designs of submarine boats in which other conditions limit the battery space seriously so that they are peculiarly suited for your battery. In the one case, the large cell would be required involving development work; in the other case, I believe we could use a cell practically identical with your Type A-8. In that connection, will you be kind enough to give me the following information:-

*Holland*  
*How about this*  
*last to answer*  
*in ten days*  
*9*  
NOV 4- 210

(-2-)

Mr. Thomas A. Edison.

Nov. 2nd, 1910.

1. Have you a European factory and if so how does the European price compare with the American.
2. What discount can be obtained on orders involving large numbers of cells.
3. If you have no European factory, could you quote special export prices, and if so, at what reduction from American prices.

As the possible use of the A-3 cells is urgent, I would be greatly obliged for early information on the subject covering not only the inquiries as to prices, etc., but also the question from the defects shown by the B-4 cells as indicated in the second and 3rd paragraphs of the memorandum herewith.

Trusting that you will be able to give the matter your early attention, I beg to remain

Very truly yours,

  
VICE-PRESIDENT

FLB/L  
ENC.

[ATTACHMENT]

EDISON STORAGE BATTERY, TYPE B-4.

In our tests of five cells sent to us by the Edison Storage Battery Co., the following results were obtained:-

First--On the normal discharge rate (15 amp) the cells gave the capacity in ampere hours claimed for them, but the average voltage of the working part of the curve is 1.13 volts, instead of 1.2 volts as claimed.

Second--On discharging the cells at 25 amp. immediately following a charge, the reduction in ampere hour capacity below that at normal rate was not excessive, but the average voltage was 7% lower than that at normal rate, being about 1.05 volts. The reduction is due to the high internal resistance of the cells. This high internal resistance not only causes a heavy drop in voltage but also causes the cells to heat. The rise in temperature of the cells during discharge was 38°F.

Third--When the cells stand sometime after charge, before the discharge takes place, a very material reduction in both ampere hour capacity and in average voltage occurs. Even when the time of standing idle extends only from one day to the next, the reduction in ampere hour capacity is over 10%. On standing 3-1/2 days, the ampere hour capacity was reduced 26%, taking the minimum voltage at .8 volts per cell. Not only was the ampere hour capacity reduced, but the average voltage was one-tenth of a volt (11%) lower than in the former case. On standing one month after a charge, the ampere hour capacity was not only still farther reduced, but the voltage curve assumed a complex form. When 35 ampere hours were taken out of the cells, the curve commenced to bend down as though the end of the discharge was near. After a time the curve bent the other way, and did not again bend sharply down until 60 amperes total had been taken from the cells. The voltage at this part of the curve was low, being only

[ATTACHMENT]

(-2-)

.63 volt.

Fourth--The curve of temperature rise of the cells during discharge is practically a straight line. <sup>P</sup> Since all the voltage curves which we have obtained from these cells are lower than those sent us by the Edison Storage Battery Co., and also the fact that heavy local action occurs when the cells are doing no external work, we conclude that the chemical reactions which take place in the active material are complex in their nature, and cannot be depended upon to return the energy delivered to them. This is shown in the discharge curve of the cells after they stood one month after charge. This curve indicated that there were two chemical reactions taking place, one giving a higher E.M.F., than the other. The fact that the temperature rise curve during discharge is a straight line would indicate that a large portion of the internal resistance is in the metallic support.

*C. H. Russell*  
Oct 6th 1910

[ATTACHMENT]

~~Get from Hallan~~

~~the text to me~~

Paul Brown

sample + which I want to envelope

1

+ let me see

the whole letter

before sending

it

3

[ATTACHMENT]

Copies of statement by Mr. Holland  
Nov. 4, 1910.

file (H)

Ans  
Nov. 11-1910

Edison

Mr. Edison:

It is hard to interpret the results obtained by the Electric Boat Co. without knowing the full details of the tests.

In the first place they have made a mistake in using the BF cell for tests as it is not designed for high current work, its poles and connectors being too small.

Then they tell us nothing about how the cells were charged, and it looks to me as though their low voltage results must have come from charging at less than the minimum rate recommended by us.

As to loss of charge on standing, it is true that about 10% of the capacity is lost in the first day, but it is not true that 26% is or can be lost in 3½ days. I would refer them to the Testing Laboratories report on this point, page 12. They found the loss to be only 14% in 5 days. The abnormal curve obtained after 1 month's stand indicates simply that the iron had lost capacity faster than the nickel so that an iron curve was obtained.

W. E. Holland

P.S. - For voltage at different discharging rates would refer them to report of the Testing Laboratories, page 61, curve 139, which shows the voltage to be better than 1.2 at normal rate and about 1.12 at twice-normal. W. E. H.

[ATTACHMENT]

Ans.  
May 11-1910

Holland Tong & Co.  
C/O =

Yankee  
~~The same as before~~

We have designed a large cell  
Especially for R.R. & countries &  
subscribers. And await the  
completion of ~~the~~  
special tools to manufacture  
them. ~~the~~ We do  
not think that the Columbus  
type of plate would be  
satisfactory & therefore  
decided to await the completion  
of the special type before  
starting to make them -  
I enclose you Mr. Holland's  
specimens according to your

letter as set forth in your  
letter -

~~Yankee~~  
~~Yankee~~  
~~Co~~

We have an European factory  
at Berlin prices will not  
be any lower as their metal  
comes higher.

This battery never can be  
a cheap one, We shall be  
satisfied if we can  
~~obtain a present order~~  
~~to~~ make the ordinary  
proof of several with standard  
unpatented We already  
S. S. Hall Co.

BATTERY-SUB.-(<sup>BOATS</sup>  
SUBMARINE)

November 3, 1910.

Mr. Thomas A. Edison,  
Orange, N. J.

My dear Mr. Edison,-

Herewith copy of letter to Rear-Admiral  
Mason. Also copy of letter to Beo in reply to his letter of the  
second instant.

Please facilitate construction of this  
battery as much as possible.

I promised the Rev. W. E. Mindlay, 699  
Ontario, Toronto, Canada, to remind you to send to him photograph,  
as per your promise.

The other gentleman who introduced Dr.  
Mindlay also wishes a photograph. I cannot at the moment  
recall his name.

Yours sincerely,

THE NATIONAL BODY OF MOTOR CAR TOURISTS

THE ONLY ORGANIZATION IN  
THE UNITED STATES HAVING  
ITS OWN HEADQUARTERS  
DEVOTED EXCLUSIVELY TO  
THE PROMOTION OF TOURING



AUTOMOBILE

TOURING CLUB OF AMERICA

BROADWAY AT 76TH STREET

NEW YORK

COMPILERS AND DISTRIBUTERS  
OF ACCURATE AND RELIABLE  
TOURING INFORMATION  
REPRESENTATIVES IN ALL THE  
PRINCIPAL FOREIGN COUNTRIES

November 3, 1910.

Mr. James F. Anderson Jr.  
C/o Edison Laboratories,  
West Orange, N.J.

Dear Mr. Anderson:-

Sometime ago the Civil Service Commission  
held an examination for chauffeur examiners and among the  
questions asked was one which read something like this:

"What is the specific gravity of the solution  
used in batteries of electric vehicles?"

There seems to be a difference of opinion  
as to the answer, which I contended was twelve hundred and  
fifty.

Will you be kind enough to advise me regarding  
this and greatly oblige,

Very truly yours,

FHE/c

The normal specific gravity of the solution of (KOH)  
Potash (21%) as used in the Edison Battery is 1.260 (26° Baumé)  
With the Lead Batteries the specific gravity should be  
1.300 (34° Baumé) though a variation from 1.275 to 1.300  
fully charged is allowable

Nov. 4, 1910

Mr. P. H. Elliott, Esq.,  
Touring Club of America,  
Broadway & 76th Street,  
New York City.

Dear Sir:

In reply to yours of the 3rd inst. regarding specific gravity of Electrolyte in Storage Batteries.

In the Edison Battery the Electrolyte consists of a 21% solution of ( $K_2O.H.$ ) Potash together with a small amount of Lithium. The specific gravity of a normal solution should be 1.210 and should not be allowed to fall below 1.160. This specific gravity would correspond to 26 degrees Baume's Hydrometer.

In the case of the Lead Batteries where Sulphuric Acid is used the Specific Gravity of a battery fully charged should be 1.300 (34 degrees Baume) though a variation from 1.275 to 1.300 is allowable.

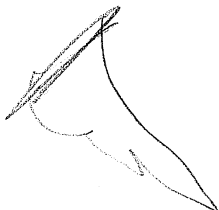
Hoping this will answer your question, I remain,

Respectfully yours,

NY-500

MILLER REESE HUTCHISON  
ENGINEER  
50 CHURCH STREET  
NEW YORK

CABLE ADDRESS "HASSACON" NEW YORK



San Mediam,

The above is conclusive evidence of the  
absurdity of using  $H_2SO_4$  around a  
submarine.

Kirsch

Yes. around<sup>a</sup> steel built ship  
Can you get details -  
S

N.Y. WORLD  
11-3-10

THE EVENING

## 13 NEAR DEATH WHEN ACID FUMES FILL SUBMARINE

NEWPORT, Nov. 2.—(Just. Baldwin, commanding, and the twelve men of the crew of the submarine boat Octopus, narrowly escaped suffocation by the fumes of sulphuric acid when she was submerged in the bay yesterday.

Coming to the surface, the Octopus signaled for assistance and was towed in. Five men were lifted out of the craft and hurried to the naval hospital. Two were quickly revived; one seemed in very serious condition. All will recover.

The Octopus, which has no tender, has been practicing shut experimenting in these waters. While she was diving yesterday something went wrong with her batteries and the choking fumes of the acid in them quickly permeated the craft. In response to her signals of distress a launch speeded out from the torpedo station and towed in the Octopus. Commander Bristol hurried out in his launch and medical assistance was sent from the hospital.

Red & Blue  
11-3-10

KLAXONS

November 7, 1910.

Mr. Thomas A. Edison,

Orange, N. J.

My dear Mr. Edison,-

In conference today with the Lovell-McConnell Mfg. Co., manufacturers of my Klaxon horn, I suggested in our literature and among our salesmen, we recommend the Edison Battery to operate Klaxons.

The battery you gave me last Spring is still on the car, has been operating my Klaxon all through the Summer, and has not yet been charged since I received it. From present indications, it is good for at least six months more without charging.

The factory wants to make a break-down test to determine how many times the battery will sound the Klaxon before it is necessary to reehhage, and I think it would be a wise plan to send them two complete ignition batteries for simultaneous testing.

I do not think it would be advisable to put out anything but the Bismuth Battery on this work, because Klaxon takes about eight amperes, and the battery when operating the Klaxon, does not get enough discharge work to warm it up. As a great many Klaxons are used in Winter, "there are about 35,000 in use altogether today," I am afraid the regular battery would not be on the job in zero weather.

Yours sincerely,

November 7, 1910.

Mr. Thomas A. Edison,

Orange, N. J.

My dear Mr. Edison,-

I am now designing a motor-cycle Klaxon.

I want to run it from a storage battery.

Obviously, the regular ignition battery  
could not be carried on a motor-cycle.

Do you contemplate making up a size battery  
that Bergmann uses in those small portable lamps, such as you  
have on your desk??

If so, I think a large number of these could  
be sold for sparking motor-cycles and operating Klaxons thereon.

If you will get up this type battery, we  
will sell the motor-cycle Klaxon complete with battery.

There are thousands of motor-cycles in use,  
and as yet, there is no adequate horn for them. I will therefore  
anticipate very large sales for a motor-cycle horn.

Yours sincerely,

87-10-10

MILLER REESE HUTCHISON  
ENGINEER  
80 CHURCH STREET  
NEW YORK

CABLE ADDRESS "MARSACON" NEW YORK

*file submarine*  
November 10, 1910.

Mr. Thomas A. Edison,  
Orange, N. J.

My dear Mr. Edison,-

I am in receipt of letter and clipping from the Boston Edison Company. The clipping is an embellishment of the one I sent you, but with appended detail of results without stating the cause of the gas.

This trouble was due to either of two causes:

First: When cruising on the surface with hatches open, and running before the wind, the exhaust gases, rising to the surface from the exhaust pipe of the engine, pour down the hatches and concentrate in the long compartment aft of the engine. The engineer feels the gases first, but enough fresh air comes in to enable him to disregard the gas. When the hatches are closed, and the boat dives, this volume of heavy gas rolls forward. The lighter air rises to the pockets formed by the walls of the hatches and conning tower. Hence, the man forward, at the elevating and depressing rudder gear, is the first one seriously effected. The danger zone then extends aft, as the boat ceases diving, and comes to a horizontal position for sub-surface cruising. Even when cruising on the surface into the wind, the back draft produced by the conning tower and shape of the boat, drives the exhaust gas into the after hatch.

Second: Chlorine gas produced by leaking jars, or stopping over of electrolyte in too abrupt diving, will, as you know, produce the same results, the man forward getting the gas first, because the acid and salt water flow toward the bow of the boat as she is diving.

Thus I am unable to attribute the result to either of the above causes without official information, which I hope to secure in a few days.

I am returning the letter and clipping to you, as you request.

Suggest that you start a submarine clipping book, for reference, as I will forward all clippings that come to my notice to you, and can look them over in the laboratory, when occasion arises.

Yours sincerely,

*M. R. Hutchison*

Sub-

MILLER REESE HUTCHISON  
ENGINEER  
50 CHURCH STREET  
NEW YORK  
CABLE ADDRESS "HARRACON" NEW YORK

Mr. Thomas A. Edison,  
Orange, N. J.

My dear Mr. Edison,-

My conversation with Mr. Bedell of the Holland Boat Company was more or less disjunct because of the derailment of the Beach Car by the defective frog, and the fact that I had nineteen people of more or less prominence in the party to look after.

Summing the matter up: The Holland people are very anxious to learn the performance of the proposed submarine type, the plates being made up in such size as will enable them to replace the present lead cells in boats already built, with the new cell. They have a definite space available for batteries, and wish to fill this space as full of Edison cells as it is possible to get it.

Would it not be possible to turn out simply one positive and two negatives for preliminary tests? I realize that the proper machinery must be made for making up the tubes, filling etc., but I hope this can be done and the three plates turned out in less time than the five months you mentioned to me.

The Holland Boat Company's contract runs out with the Exide people very soon, and I think they are figuring on using Edison Cell exclusively. Mr. Bedell seemed exceedingly anxious to get little more definite data than is at present obtaining.

I am enclosing a letter received from McNair today, which kindly return after reading.

The friends I took out on the Beach Car Saturday predict for it a very brilliant future. Mr. Alfred I duPont came over from Wilmington to look into the battery matter. He wants to design up some electric locomotives for hauling through his powder works, and also batteries for lighting his residence. I am putting Billy Bee on his trail.

Yours sincerely,

*Edison*

*Hutchison - we already have the curves of the small tube cells showing the characteristics from which the big cell can be calculated. I don't think it is a large improvement of a cell for the 1/2 in. of tube which alone is furnished with 1/2 in. of plate.*

*November 21, 1940.*

[FROM EDWARD H. JOHNSON]

Nov 21 / 1937  
Eft Y - Don't bother with flent<sup>ness</sup>  
he knows all about the coming fest.  
Burgummas & his brother's GLEE CLUB  
New York  
Nov 11/37  
I had a long session  
with Chas H Flint  
yesterday at which  
the reader gave  
rather attention.  
proposition embodying  
the use of ym Bette  
in connection with  
sub movies. I would  
like to have a chat  
with you on the  
subject. I will come  
out Wednesday of  
that purpose unless  
you in the meantime  
Telephone me not  
to do so. Yms DHG

*Bat. tests*

Nov. 25h, 1910.

Messrs. Edison and Dodge:

In the new, regularly-assembled, "A8" plate groups which you sent me I find the metallic resistances and resultant volt losses to be as follows:

Nickel Group.

Total resistance from pole top to eight mid-points of the parallellled plates: .000189 ohm. This resistance is divided up as follows:

Pole,	35%
Rod & Washers,	15.2%
Plates,	49.8%

Iron Group

Total resistance from pole top to nine mid-points of the parallellled plates: .0002187 ohm, divided up as follows:

Pole,	30.2%
Rod & Washers,	17.2%
Plates,	52.5%

Adding the resistances of the two groups the total metallic resistance is found to be .0004074 ohm, or about 20% of the average internal resistance (.0019 ohm) of the "A8" cell.

According to these figures the metallic resistance (Maximum) in a new "A8" cell would cause volt losses as follows:

(Page 2)

	<u>At Normal Rate</u>	<u>At 4 x Normal Rate.</u>
Volt loss in poles,	.0079	.0317
" " " rods & washers,	.0040	.0159
" " " plates,	<u>.0125</u>	<u>.0502</u>
Total, per cell,	.0244	.0978

In percentage figures, the metallic volt losses would be:

At normal rate, 2% of average voltage.

" 4 x normal rate, 8% " "

In a 60-cell battery of AS cells this would amount to:

1.44 volts at normal rate.

5.76 " " 4 x normal rate.

I have also made measurements of metallic resistance of groups taken from an "AS" cell which had had 3 or 4 discharges, and then was given a severe lateral jolting treatment, and have found in this case that the contacts had deteriorated greatly, showing increased resistance of 78% in the nickel group and 57% in the iron group.

These results show that metallic resistance is a considerable factor in the case of the "AS" cell, and also that the contact system, now used, is liable to much deterioration.

The conductivity of the poles, plates and connecting rods should be increased as much as is feasible. Also, I would urge the necessity of improving the present contact system, and would suggest that autogenous welding of the tubes and pockets with their respective grids and of the grids with the connecting rods, if found practicable, would produce ideal conditions, both as to conductivity and as to permanence of contacts.

Walter E. Holland.

W.E.H.

MRH.  
Submarine

MILLER REESE HUTCHISON  
ENGINEER  
50 CHURCH STREET  
NEW YORK

CABLE ADDRESS "HASSAGON" NEW YORK

*Will see Ricketts man in  
12 nickel cent doubt if can  
do anything as I have a fine  
contaminated nickel ore  
November 30, 1910.*

*5 Am 12/1/10*

Dear Mr. Edison,

About a week ago, while in conference with Geo. W. Young and Dr. Ricketts, of the well known firm of analytical chemists—Ricketts and Banks, Dr. Ricketts said he has in his employ a very bright man, a chemist, who has succeeded in extracting nickel from nickel-copper-iron ore etc., in a perfectly commercial manner.

At the time, owing to the other matter in hand, I did not realize the importance of the statement. This afternoon, while talking to Ralph Beach in Young's office I suddenly remembered, and called up Dr. Ricketts to verify the statement.

He says it is true. I then said I thought you would probably be interested in learning of it, as I understand you are paying a pretty stiff price over the cost to produce—8¢ per pound, and furthermore own a nickel mine.

I have asked Dr. Ricketts to go out to the Laboratory when convenient to talk this matter over with you. He says he can make it early next week.

Do you want to see him? If so, I will arrange a day.

I returned from Boston today and am arranging my data to report to you the result of my trip to the Electric Boat Co's yard. Will be out Thursday afternoon—tomorrow.

Sincerely,

*Miller*

[DECEMBER 1, 1910]

Battery  
TAK

A. J. C. C. C. C. C.

When Mr Edison  
started his experiments  
to perfect the battery  
he borrowed 500 000 +  
gave a Bonds Mortgage  
for the money ~~of~~ <sup>on</sup> the  
Co which he organized  
with 1 Million Capital -

~~After~~ The whole of  
the Million was issued  
to E for his patents <sup>in full</sup>  
then he turned over

2

to the subscribers to  
the bonds, 250 000  
as a bonus for  
subscribing for the  
bonds, - ~~the~~

The whole of this sum  
was expended ~~for~~ in  
experimenting - then Mr  
Edison loaned money  
to the Co to continue the  
Experimenting - then  
when a ~~model~~ battery

3

was made that was thought  
would be successful  
He furnished money to  
Equip & run a factory  
~~and~~ for the experiment  
upon & devising &  
Constructing the many  
special machines need  
to use the battery  
also money to establish  
a chemical works  
for using the oxides etc

4

These factories were  
run commercially  
& produced many  
thousand cells  
after they had been  
in the hands of the  
public 1 1/2 years Mr  
E decided that they  
were not sufficiently  
perfect to ~~do~~ achieve  
he started to reduce  
to cost production  
of a perfect

5

Storage battery to  
displace horses in  
cities -

He then ~~started~~ closed  
his works & started  
again & after 3 years  
produces the present  
battery which he knows  
will be successful &  
also devised & produced  
a large variety of  
special mechanisms  
precisely every dollar  
of the cost of which

6

was loaned the Co by  
Mr Edison - after the  
works had been running  
one year, a meeting of  
the stockholders was  
called - The report  
of the public accountants  
Leysbrand Moulguy &  
of Phila was presented  
to them showing all  
the expenditures & assets  
etc & Mr Edison offered  
to take long term notes

7

or bonds, or increase the capital stock & he would take that at par. The stockholders preferred the latter & it was done.

The Co are now turning out about one million dollars worth <sup>of cotton</sup> per year & are behind their orders — But no money is being made as the overhead expenses due to advertising & sales dept expenses more than swallow it.

8

but this preliminary work which is necessary to establish the ~~work~~ <sup>business</sup> will soon be

over & we expect that the works will be exceedingly profitable & that in addition to ~~deduct~~ <sup>deduct</sup> the experimental account will be wiped out.

The interest on the bonds is 6% &

matures in 1917.

Also all future inventions in storage batteries made by Edison is the property of the Co —

H. Miller

BATTERY STORAGE -  
Oct 4 1910

December 1, 1910.

Dear Mr. Edison,

The following is a report of my visit to the Works of the Electric Boat Co., Quincy, Mass., Nov. 29, 1910.

PLANT.

Have no ship-yard of their own. Located in yard of Fore-River Shipbuilding Co, to whom they sublet contracts for all heavy work on their boats on Atlantic Coast, with similar arrangements with concern on Pacific Coast.

Present building about 125' X 60', 2 stories, in which is located their large drafting room (about 25 draftsmen), their general offices, and a machine shop (about 80 men) for assembly of smaller parts. All contracts for 90% of their parts let to outside shops.

WORK IN HAND

They are building two large submarines for U.S. Navy. Each about 135 feet long. Will be launched sometime next Summer. Will soon start to build three more of same type on Pacific Coast, which will be launched sometime during Spring of 1912.

The batteries are installed in one of the two boats building and contracted for on other one. The three on Pacific Coast could be equipped with Edison battery if data can be procured quickly to incorporate in final design.

Contracts for four more boats will be let soon, and this had called Spear to Washington before my arrival. They seem to expect some new features regarding battery to be incorporated in specifications. (This, no doubt, owing to my visit to Washington several months ago, and I think I had better run down to Washington in a few days to keep in touch with developments now.)

They are also finishing two heavy oil engines which were designed by an ex British Navy Officer and built by them. 4 cycle, 250 to 300 H.P. (Another kerosene engine has recently been developed in Germany which Bedell states will supersede these English engines. It is 2 cycle)

They seem very anxious to procure the best of everything for their product. Very progressive. Do good work.

PERSONNEL

Shear is the business head and lobbyist. Bedell is about half engineer and half business man - pretty shrewd individual. Edgar is electrical engineer, and one of the best I ever talked with; thoroughly on to his job; very anxious to use Edison cells; prolific in new ideas regarding Edison Cell improvements; seems to thoroughly understand the general lay-out of the cell; has designed large cell to meet submarine requirements, based on 1" cube negatives etc. They have another man who is their expert on tuning a boat up to her work after completion.

FINANCES:

Didn't succeed in finding out very much about this.

Bedell remarked they expect to increase their capital soon, to take care of a new works they are building near Quincy, and asked me if I thought you would be interested in investing in their Company. I told him you never go into outside ventures as you have your hands full with your own ideas. I told him I might be able to assist them if they desire. (I could get the money together for them if they will let in enough to make it worth while from the standpoint of a voice in adopting Edison Battery exclusively without calling on you for exclusive rights to Edison Cell for submarine work). He said he would communicate with me later regarding this.

I have made no Commercial Agency investigation as to their standing. Suggest you do this, or I will, if you desire.

**POLICY:** They seem very anxious to avoid antagonizing the Navy Department in any way, because in the beginning the submarine was looked upon with disdain by battleship adherents. Its introduction has been uphill work, which has been especially due to unsatisfactory performance of lead batteries and gasoline engines. The boats that have been built have been forced on the Navy by Congress in making appropriations for their construction. This has been accomplished by the expert lobbying of Spear. But the Department has awakened to the possibilities of the submarine, and their advance will henceforth be more rapid.

**BATTERY MARKET:** The ready market for the Edison battery lies in renewals for boats already in service in England and America. About twelve of the U.S. boats will soon need new battery equipment. The cuttlefish and tarantula need them this Winter, but I may be able to persuade Admiral Clegg to wait until next Winter on all renewals.

It was to meet this ready demand that Edgar designed up the cell, blue-prints of which Bedell gave you. (see detail remarks under Proposed Submarine Type Battery)

**EXPECTED DEVELOPMENT:**

It takes but little reading between the lines to find a firm impression in the minds of those people that a very large demand will soon come from South American Countries for submarines. In tropical waters, as you know, it is next to impossible to operate lead batteries. (See my former report). So the success of the submarine very largely depends on the Edison battery, and nobody appreciates this fact more than the E.B.Co. They asked me at least a dozen times to impress on you the importance of early data to them on which they can base their calculations. It was very amusing to see their attempt to hide their anxiety on this point.

**FEELERS:**

Bedell asked me what our ideas were regarding tying up with them exclusively. Wishing to evade the question, I replied that we want to see what can be produced in the way of a cell suited for the work before considering the business side at all. In other words, I want to let them keep at work advising us in adapting the battery to submarine work, without committing ourselves on a business

policy.

He then asked if any of their competitors had approached us on the battery subject. To this I replied that no other submarine company seemed as much alive to the importance of the Edison Cell, doubtless due to their not having followed the subject up as closely as the K.B.Co. I told him that practically all the Navies are keenly interested and constantly asking for more details, which were being given them in general terms. This seemed to increase their desire for ready data for calculations.

PATENTS:

I cannot impress on you too strongly the necessity for covering up every important detail of construction of this submarine cell, as it developed, because I think I see an inclination of the part of the K.B.Co. to attempt to crowd in ahead of you on some of these. The question of riveting the nine A size plates to the large steel built-up plate came up. This calls for several hundred rivets per plate. Edgar said he had evolved a cheap method of doing this, which he could not divulge to me until he had talked with Bear, because it is patentable. He also called attention to the date of his drawing of assembled cell, showing what he claims is an improved gas vent and filling bung over present practice. I told him there are a hundred different ways of attaching A plates to large holding plate, and that the combined filling bung and gas trap was one of the first things you thought of years ago but decided against on vehicle batteries for practical reasons. At the same time, that combination he has worked out, with two mercury and final liquid trap looks pretty good for this purpose.

DESIGNED CELL:

Edgar suggested that if you decide to retain the 4" tube negative plates and prevent A positives, both thickened up in the plates, the cell he called the 9A-16 Type, because each plate would be composed of 9-A positive or negative plates, and 16 positives per cell. Also that if you use the 4" tubes, you call the cell type 9-A-32, the last number depending on number of positives you get in. While this is unimportant, he laid stress on it for some reason.

The cell as he designed it is of correct width, and the new cell must not be even a sixteenth of an inch wider, as he can't get the required number of cells in existing battery tanks aboard boats in service. The cell can be 4" higher over all, if necessary, and a little thicker. They have got to get twice as many Edison Cells in the same space as they have lead cells, to get the requisite voltage for present equipment, and therefore the thickness must not be increased very much.

The 1/2" shown an oblong opening in top of cell. This is a flat tube extending to bottom of cell, between side of jar and end plate, and must be thinner than the end nut, of course. He thinks such an arrangement will facilitate taking electrolyte out when necessary to renew. Some such provision will have to be made. He proposed to stop this tube up by hammering into the top a rubber stopper of proper shape, and renew these stoppers when renewing electrolyte. This kind of subterfuge is not Edison Battery practice,

but I let it pass without comment.

They support their cells now on moulded glass pieces which dove-tail together end on, alternate ones provided with tapers to permit flow of any free electrolyte that might have slopped over into the tank. These supports are about 1" high, 2" wide and 8" long each, and are placed across the bottom of the jar- at right angle to plates. Edgar proposes to use somewhat similar glass supports for Edison cells. This point needs looking into. The jars or "plant" lead cells are placed in compartments made up of 1" wood boards, painted with acid proof(?) compound. All the positives are hooked on to a rod which extends to the negatives of the cell ahead and so on. All connections thus run fore-and-aft of the boat, the plates lying athwart-ship. This prevents the water-hammer effect of the electrolyte on the sides of the jar when the boat pitches in a sea-way, or blows. Also does not wash the active material from the plates as rapidly.

They are figuring on placing Edison cells with the plates athwart-ship, so their connections will remain their standard fore-and-aft. They didn't state just how they propose to separate the jars. This point needs attention.

Attention was called to the fact that the cell they designed up was on current density procurable from the 1" tubes and the cell will have to be re-calculated throughout for the 4" tubes. This is obvious.

#### INFORMATION REQUESTED:

They want as quickly as possible, the following data:  
Basis of 4" tubes, Plates 3 A size wide and 3 high (as laid out in their R/P), 7 hour charging rate:

- (1) Discharge curves of 1, 2, and 3 hour rates.
- (2) Proper spacing between plates
- (3) Electrolyte quantity and weight
- (4) Temperature curves at 1, 2, and 3 hour discharge rates, cell being increased in such increments as you propose to use so as to conform to operating conditions. All in an air temperature of approximately 80 deg. Fahr.
- (5) Temperature curve of charge under said conditions, 7 hour rate, and, if you can, a comparison of the same as you recommend.

#### PRICE:

They seemed anxious to learn something definite as to proposed price. Tried to convey the impression that they expect a cheaper price than the lead battery equipment. I told them it is rather early to talk prices, under the circumstances, but that I didn't see that the price made any especial difference when the difference in the batteries is considered and especially if the battery should be specified by the various Navies.

I was a good listener.

Sincerely,

*Edison Battery*

December 2, 1910.

Mr. Thomas A. Edison,  
Orange, N. J.

My dear Mr. Edison,-

I find I have several curves of the special cell No. 6, having 1/8" tubes, which in some way were filed without being brought to my attention.

I am forwarding one of these curves to the Holland people today, with statement that actual results of manufactured cell will eclipse this performance by from 25% to 30%.

I am leaving for Washington tonight, and will report result of my trip Monday.

As a reminder, please get the box you were going to put my various reports in for location, near your desk.

You promised me one of those large photographs of yourself at work in the laboratory, such an is hanging in the library near the statue. I wish you would write on this "To Hutch - Thomas A. Edison." I want to have it framed and hung in my office along with sample board of Edison Cell, which Billy Bee is going to send me.

I have sense enough to see that the devotion of a great deal of time to the Edison Battery and Edison-Beach Car will prove very remunerating, and am therefore giving these matters precedence over all others. I have, after years of effort, built up quite a formidable array of financial and personal connections which I can use to great advantage on this war, and want you to feel that whatever I undertake for you will be given the very best attention in my power. I have not tackled anything yet that I have fallen down on, and want to have this record obtain in my work with you.

Yours sincerely,

Dec. 6, 1910.

Messrs. Dodge, Bee, Wakeman, Goldstein & Christiansen:

An important change in our present practice has been approved by Mr. Edison, namely, that 25% KOH and 15 grams LiOH per liter be made the Standard Renewal Solution, to be used in all cases where cells in service require refilling due to their solution becoming weak.

This change has nothing to do with the first filling of cells, but only affects the present practice of refilling.

The supply of 21% KOH and 20 grams LiOH per liter now on hand may be used up for refilling, but thereafter its use is to be discontinued entirely.

The normal specific gravity of the new Standard Renewal Solution, at the different temperatures met with in practice, is to be determined by Mr. Goldstein and reported to the various departments interested.

Walter E. Holland.

W.E.H.

December 13, 1910

Dear Mr. Edison,

There are over 40,000 users of Klaxon today.

Every one of them is using some kind of battery.

There is no reason why all of them should not use Edison Battery, and the majority of them would do so if they know of the wonderful performance on my car.

I am enclosing herewith a letter which I suggest you publish in all the automobile papers with proper additional matter to bring it out. You will find it will pay to do so. A copy of it, with literature of Edison Battery, should be mailed to every user of Klaxon. I have a record of all purchasers, with credit rating. Perhaps it will come in handy.

I am in this Battery job heart and soul, and am following out your request to call your attention to anything I think of which may prove valuable, in lines outside of my submarine department.

Now is the time to ram the ignition battery hard, for next Spring's business.

Sincerely,



MILLER REESE HUTCHISON  
ENGINEER  
50 CHURCH STREET  
NEW YORK

CABLE ADDRESS "MARBACON" NEW YORK

December 14th, 1910

Edison Storage Battery Co.,  
West Orange, N.J.

Gentlemen,

On May 1st., 1910, I placed one of your B-4, 6 Cell Ignition Batteries on my automobile, for operating my Klaxon Warning Signal.

Since that time, now practically eight months, my car has been driven approximately 12,000 miles in daily service.

During this entire period I have never put a drop of water in the batteries, AND HAVE NEVER CHARGED THEM.

They have never failed to operate the Klaxon, and are today up to full voltage and evidently good for several months more, before re-charging will be necessary.

I consider this a wonderful performance and, as the inventor of the Klaxon, cannot too highly recommend your battery for use therewith.

Very truly,



May we send you a  
Catalogue and other  
information about the  
new Edison Storage  
Battery?

Edison Storage Battery Co.  
101 Ashland Avenue,  
Orange, N. J.

Miller Reese Hut-  
chison invented the  
famous Klaxon Horn  
for automobiles.

Read what Mr. Hut-  
chison says about  
the Edison Storage  
Battery.

When is the E Co going to put up a big  
Concrete Garage for 600  
Electric Vehicles

Ans 12/24/10

ARTHUR WILLIAMS  
FIFTY-FIVE DUANE STREET  
NEW YORK

22 December 1910

Thomas A Edison Esq  
Llewellyn Park  
Orange N J

Dear Mr Edison

Mr W H Holland's paper  
presented before the meeting of  
the Electric Vehicle Association  
of America, Tuesday evening, was  
admirable. It cannot receive the  
wide publicity.

I cannot but think that  
with your battery Pintsch gas  
lighting on railroads can be en-  
tirely displaced. Is not the  
moment "psychological" for a  
suggestion from you to the rail-  
road managers.  
Wishing you the Compli-  
ments of the Season,

Very sincerely

Arthur Williams

My Dear Mr Edison  
are taking advantage  
of the occasion to  
think the RR  
people will  
adopt battery  
cars freely

13-22  
Page 10

# THE WESTERN UNION TELEGRAPH COMPANY.

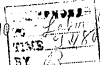
24,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.

This Company TRANSMITS and DELIVERS messages only on conditions limiting its liability, which have been accepted by the sender of the following messages. From cost be granted against only by repeating a message back to the sender within the time specified for correction, and the Company neither assumes nor is liable for errors or delays in transmission or delivery of telegraphic messages, beyond the amount of tolls paid thereon, nor in any case where the claim is a consequence of a message received within sixty days after the message is filed with the Company for transmission. This is an UNLIMITED MESSAGE, and is delivered by request of the sender, under the conditions named above.

ROBERT C. CLOWRY, President and General Manager.

RECEIVED at 100 Wall St., New York, N. Y.  
Dec 22 1910

Washington DC - 1  
Thomas A. Edison



Perfectly successful clear field sold  
one Beat Battery in con  
price please meet mr. laboratory  
mine tonight important  
Hutch

December 22, 1910.

Mr. Thomas A. Edison,  
Orango, N. J.

My dear Mr. Edison,-

Herewith please find letter from Captain  
Bartlett which kindly return after reading.

Have just spent an interesting 45 minutes  
with Edgar of the Electric Boat Company. Told him we do not feel  
justified in tying up with any boat company now, and furthermore,  
do not feel that we would be doing justice to the E. V. Company,  
by recommending that they tie up with us at present. I dwell  
on the fact that we have not made this submarine battery yet, and  
while it may be perfectly satisfactory, you have to be shown on  
a thing before you will decide one way or the other about it. I  
then asked him why they do not make their own lead batteries in-  
stead of tying up with anyone, as pasted plate is an exceedingly  
simple article of manufacture, and would leave them free to  
purchase our battery or any other battery they might desire for  
special purposes. He tried to pin me down to a statement as to  
whether or not we would care to consider tying up with them at  
some future time, and I was very careful to state we would come to  
no decision regarding that now. He was not nearly so bombastic  
and dictatorial today as he was on Tuesday, and finally wound up  
by saying he would try to keep the bars down, so that they would  
be free to hook up with us if we desire them to do so at any  
future time. Seemed rather disappointed but antagonistic, and  
offered to cooperate in any way they can meanwhile. I think the  
matter stands in a very safe condition now, and that we are playing  
safe no matter what way the cat jumps.

Wishing you a very happy Christmas and many  
more of them, I remain,

Yours sincerely,

Goldstein -

Make 2 or 3 batches  
of  $\text{Ni}(\text{OH})_2$  from dry

Nickel sulfate & dry  $\text{NaOH}$

in rolls & press the dough  
to a solid black and

dry in a covered box  
with one hole in it

for 14 days or until  
dry —

Edison V

12/23/10

H. L. H.

Battery St.

12/27/10

TO ALL EMPLOYEES OF THE EDISON STORAGE BATTERY COMPANY:

Mr. Dodge having resigned as General Manager of the Edison Storage Battery Company, on and after January 1, 1911, Mr. George F. Scull will act as General Manager.

FRANK L. DYER,

12/27/10.

Vice-President.

56  
Battery Storage (1910?)

Inspection

1 - perforated stock before use in tube machines, to ascertain if holes are open, if the size of holes have not changed but follow a standard gauge, to see that the holes next to seam are smaller than those away from seam so tube will not split by swelling of mixture, to see that the thickness of the stock is the same within agreed limits both for iron and nickel tubes - Test the tensile strength of the perforated strip crosswise one inch square. Test the nickelpating to see if right amount put on - test if the nickel is welded perfectly to the steel as a check against having too low a temperature in the annealing pot. Test width of ribbon which should not vary between agreed limits. Test the grinding of the burrs so that the hole shall not be too small or too large. Test if the grinding has been even across the whole width of the strip not more on one side than the other, producing large and small holes. See that the width of the perforated portion of the strip is always the same, so as to catch any mistake in using a new master die. Inspection must be hourly or as often as will prevent making any great amount of waste stock. The steel strip is very expensive, and any mistake should be quickly ascertained to save waste as well as to insure proper tube stock.

Tubes should be inspected on end to see if proper lap, if proper length and diameter both ends, inside and out,

if lap is right length of spiral right, and if properly cleaned for final use, and this done hourly from machines.

That cups are proper as to size and shape and properly cleaned for use.

Tubes after ends flattened inspected for cracked ends and insufficient length for clamping in grid, or not flat, also spacing of rings, tightness, etc.

A certain number daily of the tube rings from each batch daily must be tested in test machine for tensile strength, inspected for nickel plating, calliper thickness of stock, burrs, width.

The caps used in ends of tubes inspected for calliper, plating and cleanliness.

The ends of the tamps in tube loading machines inspected to be sure they are not wearing noticeably and they are to be replaced if worn beyond an agreed amount, also if the contour of the end is appreciably worn, or if the end has roughened as if not polished, it breaks the flake and makes a bad tube.

The calliper of the molds should be inspected at least twice a month to see that the holes are not worn in spots or as a whole.

The Company will inspect the filling machines even if worked by contractors, the Company furnishing a traveling inspector to pass along machines and see that all are feeding right and call contractors' attention to sticking tamps and bad feeds. The night inspector to be under the day inspector

and both under the Inspection Dept. The contractor has no control of these inspectors, they are on toll for this specific job. I propose Walter Archer for this job, as he has had seven years experience.

Twenty or more finished tubes are to be taken each day, the number to be agreed upon, cut open and tested for eye and electrical contacts.

A traveling inspector will test for calliper, etc., all parts being made by screw machines, other machines to stop instantly any production of bad parts by wear or displacement of tools. Also punchings, grid, etc., came in course of manufacture, welding. All parts made in shop are to be brought into the inspector's room daily and inspected upon agreed gauges and turned into the stock room - probably same system as is now in vogue at Phonograph Works - don't want to delay inspection to find several hundred parts wrong before it is found out. Every inspector shall have his mark either to go on the article or on the box, showing that he has passed it, and nothing goes into stock room without mark or slip that it is passed and is O. K. to be given out.

All assembled tube plates finished shall be inspected for tightening of tubes, for cracks in leaf holding tube, for rights and lefts, for spacing of rings, for spacing of tubes, for flatness of tubes, which must not exceed a certain amount, as it makes short circuits possible, for calliper of grid, etc.,

and particularly burrs on holes in grid where connected to poles. Same to apply to iron plates if pockets not loose, for pockets badly fitted, for proper corrugating and pressing, for flatness, for thickness of pockets, which must not exceed a certain amount, otherwise there is danger of bulging the can, as the several irons when too thick bulge the whole crate of grids, especially if tubes are not flat enough, and makes assembling difficult.

The iron pockets after filling to be inspected as well for weight, soft ends, and flaws in cups, closing in, etc.

It is very essential that the hole, both in iron and nickel grids, through which the pole pieces pass, shall be free of burrs and very flat and that the washer also should be very flat. Otherwise, when a cell is assembled, the area of contact will be loosened, and if there is any burr or the washer is not flat and smooth, the contact or current will only pass through a few points and as current on a hill is very heavy, these points will heat and the resistance of the cell increased enormously, and in some cases fail to drive the vehicle. This is one of the most particular parts of the cell.

Many dismantled cells of old type show that instead of grid touching washer all over, it only touched in a few spots.

All parts of the cell should be inspected for perfect nickel plating, and what is as important, that the welding annealing process should have been carried out at such a temperature that there is a good weld. I have found several cases where tubes have not been through the annealing process and

in one case where they have never been nickel plated.  
Inspection of the knives for cutting flakes  
should take place constantly; also the squares should be  
inspected for burrs (if the knife gets dull it makes a  
bur and then it is very difficult to separate the flakes  
after copper has been eaten away). This is a very im-  
portant point - sharp knives - no bur.

All flakes should be inspected before given out -  
inspected for burrs and loading weight.

All nickel hydroxide should be inspected for  
dirt for sizing. Also the crushing devices inspected  
so that too much fines are not made, as these must be  
returned to Chemical Works to be worked over again at  
considerable expense, without the crushing and sizing  
devices are constantly inspected - these fines will run  
up -. Also, the drying of the green must be inspected,  
the green should be perfectly dry before use.

The green should not show any fine float dust  
after ready for machines, as this prevents green from  
flowing even in the chutes.

All rubber parts as received from factory must  
pass thru inspection dept. to an agreed gauge - as well  
as the separators which should be returned to inspection  
dept. for inspection as to size. The sheets from which  
they are cut should be inspected as to size before being  
given out for cutting. The cutting machine for cutting  
separators should be watched for temperatures and sharp-

ness of knives so there shall be no burrs.

All rubber parts should be treated in the hypochlorite sal and system devised so that no rubber can get into shape to be worked up unless it has been treated in the hypo-solution. It is particularly necessary to have a full assembly gauge to gauge the side hard rubbers to see that the slots are in proper position and to hold the rubber piece up to an allowed variation, as they are very liable to change their compound and temperatures of vulcanization and give us distorted pieces which makes assembling of cell difficult and makes a bad crooked bunch of plates with liability to short circuits. Every week one sample part of each large shipment should be sent to Goldstein for analysis to see if they are not putting in deleterious substances.

Every bunch of cell plates before putting in the can should be passed by an inspector and finally before welding the top on, inspected again. Also inspected for position of separators, side pieces and see if pieces are marked right, if bottom piece is in, if thin sheets are in position, if plates are screwed fast, etc.

All cans should be inspected, tested and passed before the elements are put in.

One of the most dangerous things is the use of wrong solutions in cells. Two kinds of solution is now us-

ed, 21% KOH with strong Lithia for new cells, and 25% KOH with weak Lithia, to send out for renewing solutions of cells already out, if by mistake the strong lithia solution is sent out for renewing the cells will be ruined. Hence, there must be devised a system whereby this never can take place; marking plainly what is in the can does no good, as renewal solutions have been shipped from Works with 42% KOH, and notwithstanding the fact that the can was marked with a tag - 41% KOH.

I suggest all renewal solution be shipped from the Laboratory at present, and always shipped in small cans and that an inspector from the Works comes over, tests the specific gravity and see it put on wagon for shipment, and that only one grade of KOH be sent to Battery Works - if there is any mistake, we can then spot it.

The machinery for the new tray will be ready and be set up; in about three weeks in a month we should be making them. These will be made in jigs and special machinery. The parts as being made should be inspected and the trays after finishing, should be inspected and no crate of cells ever shipped out without the inspector's mark thereon.

We will furnish a tank and material to dip the parts of the tray before assembling. Your tool room should make the dies, etc., for the iron parts connected to the trays.

I have rigged up a temporary place for manufacturing the dopes and will furnish it from the Laboratory.

It is essential that the wood/<sup>used</sup> should be thoroughly seasoned, if not it changes our dipping so it cannot be used.

The nickelhydroxide varies considerable in capacity - some batches give high capacity and some low. Hence, when a set of cells have been tested they should be assorted as to capacity as near as possible so ~~that~~ all the cells of a group should be alike.

The test cells should be filled to a predetermined point and allowed to soak for a predetermined number of hours, then any water put in should be put in by the signalling filler, so they all have the same height, thus reducing the slopping out of solution and reducing the specific gravity. Heretofore, cells have been shipped out with varying specific gravities - this should be stopped and a predetermined method adopted so they will go out with not less than 20% KOH. The tops while testing should be kept clean.

The connectors, poles, and lugs should be thoroughly inspected and watched all through the ship, and finally in the test room for good contact and detection of any changes by wear of tools, which should lower the area of contact and thus produce heat and loss of voltage on heavy discharge.

As soon as the new crate is fully adopted, the operation on the cans of the base on the sides and also the indentations on the bottom can be given up, but not until the new trays receive general approval outside.

The iron parts on the tray need not be nickel-plated as the dope prevents rusting.

Note One

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I suggest that the two principal men who have charge of the preparation of the tube and cup stock be given a contract to prepare this stock and have all supplies and labor charged to them, as well as the steel and tool room work, so that they shall be, in fact contractors and pay for all spoiled raw stock. That we set a price 40% lower than what the cost is now to us, and then guarantee wages and agree that this price shall hold for one year, and they to make all they can above wages; that the work must be in quality as per inspectors instructions and that any excess earnings be paid for monthly.

All stock they use to remain in stock room and they only take out what is daily needed, which is charged to them. Work in progress will be inspected by our inspector, but this not to relieve contractors from being charged with bad work.

That if contractors desire some special device to cheapen work, that it will be made at cost and charged to them and paid for out of their profits, and if it is successful the Company will refund the money when the contract expires. If the contractors fail to improve and cheapen the work the Company to have the right to rescind the understanding on giving thirty days notice. The Company reserves the right to object to any men used by the contractor which they have reason to believe is incompetent, or can be replaced by a more competent man. All work done in tool room, repairs, etc. to be charged contractors with General Expense added, as well as cost of stock.

Note Two

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I think a large saving could be made by having either the Laboratory or Phone Works furnish pipe fitters, carpenters etc. for particular jobs when wanted. The tendency of each works is to keep a carpenter and fitter for odd jobs; when these odd jobs in the course of a month might not take a week. Men are taken on for a rush job and are not laid off. The men always find something to hold on to. If any department wants a job done let them make out a requisition for man and then, having previously arranged with Laboratory or Phone Works, the job can be done by their men and charged to the Company. In this way we can carry carpenters, blacksmiths, pipe fitters etc. at one point and keep them all busy. It is the same way with laborers. There should be a general laboring gang from which each of the works can draw from, for particular jobs.

I think that the making of tubes and cups should be let out to two contractors working together as one contractor-on same basis as the strip and that all spoiled work and not passing inspection, should be charged them etc.

If either of these two contracting gangs want to have included as partners of a tool-maker in tool room to insure cheaper repairs to them,- they to have the privilege; his wages then being charged to them, on their jobs.

Note Three

-----

I think the tube filling job should be contracted out to three partners, two on days and one on nights. All spoiled work to be paid for. They delivering tubes, ringed and complete to us ready to assemble in batteries. Also they are to pay a set fine per 100 tubes when the electrical tests show an average variation between the highest and lowest capacity of the tubes, of more than 75 mil. amp. hours; or in lieu of this, when the percentage of split tubes falls below a certain average for flake contracts by eye and by electric contact testing machine

Note Four

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I think the whole can job could be put on contract with two partners.

Ditto:- The screw machine parts.

Flake plant including cutting sheets in squares, dissolving out copper and delivering over falks to the Company for a fixed sum. We charging current and all supplies. The quality to be of a certain kind, to be determined by agreed tests,- all repairs paid by contractor.

Note Five

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A complete stock list book should be started for raw stock and finished stock bought outside, and a minimum amount agreed upon, below which if it falls, it must be replenished by new orders. This minimum will depend upon the daily output and also the time required to obtain new supplies after the stock has fallen to a minimum.

Note Six

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No experimental machine shall be made at the battery works, thiomust all come thru the Engineering Department of the general works at the Laboratory. If a new machine is proposed or improvements in present machines desired it is to be put up to the Engineering Department at the Laboratory for solution; designing and making and setting up experimenting and turning over a completed job.

Note Seven

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It is my opinion that somebody is stealing nickel metal from the Works. Get from Silver Lake all the metallic nickel sent to us and those bought outside and credit all the returned scrap. Then take stock on hand, as near as possible, and account for nickel in cells, as far as plating and see how it checks.

Hereafter charge out the nickel to Plating Dept. and credit scrap and flake and see that scrap is kept, so that it cannot be stolen.

Note Eight

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As soon as possible, devices for saving the nickel and copper, now lost in the wash water should be installed. If we buy outside anodes for regular plating baths, it should be stopped and we should make them ourselves. Silver Lake can manufacture the nickel ammonium sulphate cheaper than we can buy it.

We should arrange with the buyer of the Pheno. Works to do our buying, it is folly to buy of dealers instead of first hands. We pay 25% more for everything than we should; also we buy the same thing in small lots every month from small dealers instead of from the factory for a fair supply.

We should buy our oil from the Standard Oil Co. and find out just what grades we want, and don't change, because every oil salesman tells us a lot of stuff. When we buy our lumber for crates, buy enough for two months and on specifications as to seasoning and quality with the right to reject it if not up to specifications.

Every man in the shop seems to be wanting something all the time; lots of things are ordered that are not essential. They order stuff when it is already in the stock-room, because the stock clerk don't know what he has from any record, but only from memory. All orders should be scrutinized, if seen to that they are needed or something we have will do. These small orders amount monthly to a large sum, as I can see from the checks and bills presented to me.

Our stationary seems to be ordered in small lots without bid; this should be stopped. I think all our large running orders should be presented to the purchasing department of the works to

Note Right Page Two

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see what they can do before we close each contract. That department can charge us for time spent on our work.

Take up with J. V. Miller at Silver Lake the subject of utilizing our scrap from punching grids, can cutting scrap and tube and pocket scrap, with a view of utilizing it for making Iron Mix for cells.

# COMPARISON BETWEEN THE EDISON AND "EXIDE" BATTERIES.

EDISON	"EXIDE"
<p>Large amount of matter printed in newspapers and magazines, written by non-technical men, making claims for the Edison Battery which no electrical engineer would consider seriously, but which the public accept without question.</p>	<p>Past record of the battery well known. Used by more than 90% of the Electric Vehicle Manufacturers who have tested the Edison battery but have not adopted it.</p>
<p>Battery still in experimental stage. Motor has been used generally by the public. Manufacturers now in the field and public unfamiliar with principles on which battery operates.</p>	<p>Battery has been generally used for ten years. Manufacturers have had 21 years' experience in battery manufacture. Trained men familiar with this type of battery scattered throughout the country.</p>
<p>If battery develops any troubles it must be shipped back to the manufacturers for repairs.</p>	<p>Battery can be repaired in practically every city in the U. S. Repair parts carried in stock at convenient points.</p>
<p>Watt-hour efficiency 50%. Requires 40% more current than the "Exide" to charge.</p>	<p>Watt-hour efficiency 75%.</p>
<p>Average voltage per cell 1.2 volts.</p>	<p>Average voltage per cell 1.96 volts.</p>
<p>Requires 40 cells for 48 volt motor.</p>	<p>Requires 24 cells for 48 volt motor.</p>
<p>Weight per cell 19.5 lbs. Total weight of battery 780 lbs.</p>	<p>Weight per cell 34-1/4 lbs. Total weight of battery 822 lbs.</p>
<p>Requires flushing (adding water to replace evaporation) twice a week.</p>	<p>Requires flushing once in ten days or two weeks.</p>
<p>Internal resistance of entire battery .129 ohms.</p>	<p>Internal resistance of entire battery .042 ohms.</p>
<p>Loss of voltage due to internal resistance at 45 amperes discharge rate, 5.8 volts or 11.6% of the battery voltage.</p>	<p>Loss of voltage due to internal resistance at 45 amperes discharge rate, 1.89 volts or 3.84% of the battery voltage.</p>
<p>Loss of voltage at 100 amperes discharge rate, 22.9% of the battery voltage.</p>	<p>Loss of voltage at 100 amperes discharge rate, 8.75% of the battery voltage.</p>
<p>Horse-power delivered to motor on 100 amperes discharge = 4.7</p>	<p>Horse-power delivered to motor on 100 amperes discharge = 5.87.</p>

Ampere discharge required to  
develop 5.87 H.P. = 125.

Ampere discharge required to  
develop 5.87 H.P. = 100.

GUARANTEE AND INSTRUCTIONS.

EDISON STORAGE BATTERY COMPANY.

.....

Orange, N. J. \_\_\_\_\_

To \_\_\_\_\_

Regarding the installation of Edison Storage Batteries you propose using with \_\_\_\_\_ furnished by the \_\_\_\_\_ Company, the Edison Storage Battery Company guarantees that such batteries for a period of three years shall be capable, under normal conditions, of developing within 10% of the rated capacity of the battery (Type A-4, 180 ampere hours; Type A-6, 225 ampere hours; Type A-8, 300 ampere-hours); and should the battery fall below such guaranteed rating during said period the Company will rebato to the purchaser a pro rata amount of the list price corresponding to the unexpired portion of the guaranteed period of three years, provided always that the instructions as to the handling and use of the battery appended hereto shall in all respects be carried out, and that access to the batteries shall be allowed to the Company's inspector at all reasonable times.

Experience having shown that when deterioration in capacity takes place either from unnecessary overheating during charge, or from want of care in keeping cells clean and free from contamination, it is due to the nickel element, the Company agrees to make one renewal of the nickel element for one half of the list price of the battery.

EDISON STORAGE BATTERY CO.

ATTEST:

By \_\_\_\_\_

President.

\_\_\_\_\_  
Secretary.

NOTE: This guarantee will not bind the Company unless signed by the President, or Vice-President, and countersigned and sealed by the Secretary thereof.

INSTRUCTIONS FOR THE PROPER CARE OF EDISON  
STORAGE BATTERIES.

.....

1. On receipt of battery inspect cells immediately to make sure the electrolyte has not been spilled in transit. If any cells are found without solution one-half inch or more below the platex tops, fill it with distilled water immediately to one-half inch above the plate tops and hold it out of commission until new electrolyte can be obtained from the Edison Storage Battery Co. The original solution must then be entirely removed from the cell and the new solution put in to the proper height of 1/2" to 5/8" above plate tops.

2. Cells are shipped in a discharge condition and must be given an overcharge of 15 hours at normal rate before using. This overcharge must be repeated after every 15 or 16 regular discharges, or the equivalent thereof, until four over charges have been given; thereafter the battery must be given the 15 hour overcharge about once in two months.
3. The rates of both charge and discharge herein referred to as "normal" shall be the following: A-4 type cell, 30 amperes; A-6 type cell, 45 amperes; A-8 type cell, 60 amperes.
4. As to regular charging, if this is done at constant current, make the rate normal to two-thirds normal, but not lower or higher; except that on a "boosting" charge of short duration the rate may be increased to any desired value not higher than twice-normal. In cases where a "tapering" charge is given, the rate may be started at 1-1/2 normal and finishing at 1/2 normal if desired.
5. The normal length of charge is taken as 7 hours, but this may be varied to meet the service requirements. This should be governed also by the work on the previous discharge. Where an ampere-hour meter is used on the vehicle or the output can be made from the ampere and time readings, the charge should be made from 20 to 30% greater than the previous output (in ampere hours) in order to bring the battery to the state of full charge again.
6. A battery may be discharged continually at any rate up to 25% above normal provided the conditions are not such as to cause heating in excess of the maximum allowable discharge temperature of 115° F. For occasional short intervals of time, in climbing hills or starting on heavy roads, no harm will result if the rate be increased to three or four times normal.
7. Do not allow the temperature of a battery to exceed 105° F. during charge or 115° during discharge, except for short intervals. Keep cells as cool as possible during charge, not at a temperature lower than 60° F. however.
8. Use nothing but pure distilled water for filling cells. Drinking water contains injurious impurities and positively must not be used. Fill cells as often as is necessary to maintain solution level at the proper height of 1/8" to 5/8" above the plate tops. Do not fill the cells above the proper height, and never allow the solution to get below the plate tops.
9. Once in 8 or 9 months of continuous service or the equivalent length of time of intermittent service, the solution must be emptied from all of the cells of a battery, and they must be immediately filled to the proper height with the fresh electrolyte put up by the Edison Storage Battery Company for this purpose. Special care must be taken to renew the solution of every cell because if any cell is overlooked, it will cause subsequent trouble. Never, under any conditions, must any acid be put into a cell.
10. The trays and the outside of the retaining cans should be kept clean and dry at all times; otherwise there may be a leakage of current from can to can, causing an electrolyte action which in time may start a leak in the cell. The tops of the cells, also must be kept free from foreign matter, as the Company cannot be responsible for the action of any battery which has become polluted with an impurity. For this reason the filling apertures of the cells must be kept closed at all times, except during the filling operation. Great care should be taken that nothing leaks through the floor of the vehicle on to the battery, which might get into the cells and produce unknown results.

11. An occasional inspection for bad contacts at the cells poles should be made by feeling the connector at each pole, while the battery is charging. If any such bad contact exists, it will be discovered by the abnormal heating of the connector and pole. Any poor contact must be remedied by removing the connector and cleaning both contact surfaces with fine emery cloth or sandpaper, as the heating might possibly be so great as to bring the whole cell to an injurious temperature.
12. If for any reason cells are removed from the trays care should be taken in connecting up again, that all cells are connected in series; that is with the positive pole of one connected to the negative pole of the next, and so on throughout the battery. If a cell is put in with the poles reversed it not only does not work itself but nullifies the voltage of another cell and also is liable to permanent injury.

NOTE: To prevent mistakes in carrying out the above instructions, the batteries should be always placed in the care of intelligent and competent employees.

#### NOTES ON GUARANTEE.

- A 1. Instructions made a part of the guarantee. Any violation of the instructions legally relieves the Edison Company from guarantee.
2. Provision made for a new set of positive plates to be furnished at 50% of the list prices of the entire battery. Evidently this applies only in case the owner of the battery by violating the instructions, relieves the Edison Company of its guarantee but it indicates a tendency on the part of the positive plates to deteriorate. The battery must be shipped to the Edison Factory at Orange, N. J., which means that the owner would be without the use of his car not only during the time the repairs are being made but also during the time the battery is in transit to and from Orange. The battery is also liable to damage in transit.

#### NOTES ON INSTRUCTIONS.

- C Taking up the points brought out in their instructions in the order in which they appear we would call attention to the first paragraph, which states that batteries must be shipped with their electrolyte in them and if any electrolyte is lost, the batteries must be held out of commission until new electrolyte can be procured. It is almost impossible to ship any kind of battery containing electrolyte and be sure that all of the electrolyte will be in the cells upon its receipt.
- D We have understood that it is very dangerous to attempt to operate Edison Batteries when the tops of the plates are not entirely covered by the electrolyte, since there is a tendency for the current to arc across the plate tops when exposed to air, and causes the mixture of gases to explode. This we believe has happened in a number of cases.
- E In the fourth paragraph, there are many times when the exact rates of current specified cannot be employed; fluctuations of voltage of changing from the end of a line will sometimes make it necessary to charge at low rates. The inference from the fourth paragraph is that this must never be done.
- F In the 6th paragraph when a battery is in service it takes current dependent upon the load, grade and road conditions, as well as other factors; as to whether the rate is more than 25% greater than normal or not, leaves room for argument to say the least. Also it is not customary for the user of an electric vehicle to make regular temperature readings of his batteries during the time he is charging it in his automobile.

G In the 7th paragraph, caution of course could be exercised to keep the temperature below 105° F. by stopping the charge entirely until the temperature comes down and then continue it at the specified rate. It will not be possible, however, under the fourth paragraph to reduce the current to a low value, as in the case of a lead cell.

H The conditions imposed by the 8th paragraph would in many cases be difficult to live up to, since water of ordinary commercial purity could not be allowed even occasionally.

I The bother entailed by living up to paragraph 9 will to a greater or less extent offset the necessity for cleaning the sediment from the jars of a lead battery at intervals of approximately the same length of time.

J Paragraph 10 emphasizes the necessity for keeping a battery assembled in metal jars in an insulated condition.

K Paragraph 11 would tend to show that the bolt connectors used in the make-up of the Edison batteries are not very reliable. A contact bad enough to produce a rise in temperature which can be discovered by feeling it with the hand is very apt to cause an arc which might explode the battery.

L The caution embodied in paragraph 12 applies to any kind of a battery.

M It has been claimed that the Edison battery is "fool-proof", but the instructions indicate that it requires more attention and more expert attention than does the "Exide".

H There are two most important differences between the Edison battery and the "Exide". -

N 1. The in-efficiency and high internal resistance of the Edison battery is a great handicap in hilly countries. Although the Edison battery is rated at 225 ampere hours as against 162 ampere hours for the "Exide" battery (Edison 45 amperes for 5 hours, Exide 32.4 amperes for 5 hours) yet the high internal resistance of the Edison battery so reduces the voltage delivered to the motor that an excessive amount of current is required to drive the vehicle up a hill and the speed of the machine is reduced, in proportion to the reduction in voltage. The net result of higher current demand and longer time required to climb the hill is a dissipation of the excess capacity of the batteries in a hilly country the "Exide" battery will give as much or more mileage per charge than the Edison and at 23-1/2% less cost for current. The same conditions obtain where frequent stopping and starting is necessary, as in city driving. An actual test in Detroit, Michigan, a level and well paved city, showed that in ordinary city work the Edison battery gave only 5 miles more per charge than the "Exide". We frequently read newspaper accounts of runs of 125 to 150 miles with an Edison battery. These were all made under the most favorable conditions. On the other hand private owners of stock cars in level cities like New Orleans, and Detroit, Chicago, etc. are regularly obtaining from 85 to 95 miles per charge and in hilly cities like Atlanta, Kansas City, Cincinnati, etc. are obtaining from 50 to 60 miles with standard "Exide" batteries. On special test runs "Exide" batteries have made as high as 115 to 125 miles per charge.

D 2. The difference in cost of the two types of battery is greatly in favor of the "Exide". Assuming a complete renewal of both positive and negative plates in the "Exide" battery to be required every 18 months and a renewal of sediment every 9 months - much more than is usually necessary - and assuming that the Edison battery will outlive the 5 year period guarantee without renewal of plates we have the following comparison.

EDISON.

Difference in first cost \$600.00

Renewal of electrolyte once  
a year for 3 years @ \$50. 150.00

Cost of charging at \$7.70  
per month for 3 years 277.20

\$1027.20

"Exide"

Complete renewal of plates  
once every 18 months for 3  
years, including removal  
of sediment @ \$190. \$580.00

Removal of sediment only for  
3 years at \$40.00 120.00

Cost of charging at \$5.50  
per month 198.00

\$898.00

In the above figures we have given the Edison battery every advantage. We have assumed that no repairs would be needed during the three year period other than the annual renewal of the electrolyte. On the other hand, the "Exide" battery is charged with two complete renewals of plates and two cleanings during the same period. We know of many instances of "Exide" batteries lasting for three years with no renewals whatever and a still greater number of cases in which only the positive plates required renewal in that length of time.

**1910. Battery - Storage - Federal Storage Battery  
Car Company (D-10-06)**

This folder contains correspondence and other documents relating to the technical and commercial development of battery-powered streetcars by Ralph H. Beach and his Federal Storage Battery Car Co. Included is correspondence by Edison, Beach, and Frank L. Dyer, vice president and general counsel of the Edison Storage Battery Co., pertaining to streetcar design, performance, manufacture, sales, and promotion. Some of the letters express Edison's concern about the exaggerated claims made by Beach regarding the life of the Edison storage battery.

Approximately 80 percent of the documents have been selected. The items not selected consist primarily of letters of transmittal, unsolicited inquiries, and documents that duplicate information in selected material.

[FROM FRANK L. DYER]

Battery, St.

1124

Feb. 1, 1910.

Mr. E. H. Beach,  
10 Fifth Ave.,  
New York City.

Dear Sir:

Your suggestion, that all correspondence relating to street car work and the use of Edison batteries therefor should be answered by you, is all right, but, of course, you must be very careful not to claim to speak authoritatively for the Storage Battery Company or to make any guarantees or statements that we will have to disclaim later. If you have any doubt as to what should be said, please see me. I will be very glad to co-operate with you as much as possible and to consult with you whenever you wish.

In this connection, please see me in regard to the Third Avenue tangle as soon as possible.

Regarding your question as to what name should be given to the car, Mr. Edison thinks that it should be called the "Beach" car or some such name, to be followed with the statement "Equipped with Edison Battery". Mr. Edison does not care to have his name used in any other way.

Yours very truly,

FLD/INN

Vice-President.

Battery - Beach

R. H. BEACH  
10 FIFTH AVE.  
NEW YORK  
EDISON STORAGE BATTERY CAR

Feb 10 1910

Thos A Edison

Ft Myer

Fla.

My dear Mr Edison; I have been operating the car during the last few days on 59th st. Not taking fares but to try it out. You will recall that I told you we bent one of the axles. This occurred last week on Friday in the evening and Mr Lynch had already invited his crowd to see the car in operation and was so scared for fear that we would not get the axle in, in case we removed it to straighten it that he persuaded me to let it remain as it was until Sunday the time of the proposed run. So I did. They all came and we ran over the 59th st line the 1st Ave line to 128th st and back and forth until they were contented. By setting back one of the break shoes so it did not touch the wheel on the bent axle I removed most of the swaying of the body due to the bent axle. The run was satisfactory and all complemented me. Senator Clark of Montana was there and was very much pleased.

On Monday I removed the axle and found it about 1/4 inch out, it was between the driven wheel and the sleeve. I am glad to be able to say that the sleeve itself stood up all right. It is now straight and in the car and we are running all right.

I expect on Monday next to put the car in regular service on 59th st taking fares.

Except for the accident to the axle nothing has happened whatever to any part of the structure.

The most trouble I have had is to settle with the various roads the question as to who has it first. All want it. I am sure that we have done the right thing in letting the Belt Line have it. I did at one time think the 28 st would be better but after more careful consideration the Belt line is the best for us.

59th st is a broad st, with several curves of large radius, it has one 6% grade, it runs in a part of the city where good people live. Passes the Plaza and other big hotels and the car is seen by many people who are likely to become customers. The conditions for operation are good for us, and afford

R. M. BEACH  
10 FIFTH AVE.  
NEW YORK  
EDISON STORAGE BATTERY CARS

a variety of conditions as above indicated, which of themselves answer the questions we have to reply to. All want to know if it will work on grades. We are working on a 6%. We take the curves, so the car answers the questions better than we can.

Again if we were on 28th st, in case we should run down we have no means of getting back to the barn. On 59th st are electric cars to push us in.

The service is slow and not heavy. Therefore I feel that we are all right as to the place. The owners of the road are kindly disposed towards us and want the car to succeed. It is to their interest to have it succeed.

I meet the old prejudice on account of our light weight, but I feel in this respect that we are right, and even we may be able to go lower.

The motors do not become at all warm. While they look awfully small and I find it difficult to get used to them myself. They do the business all right so for the present I will let them alone.

In case anything turns up that is bad I will let you know. I suppose the good things do not interest you much.

Yours truly,



Bathory - TJE

Pic & Club  
FEB 12 1910

YMM

Beach

Harry (B)  
Type this, keep copy  
& send to Beach  
Tear out sketches  
paste in letter

Working out the figures sent  
while good, you are not down to  
where you should be taking in  
all losses & accepting the regular  
drawbar pull of a standard  
freight car - We have plenty of  
chance to ~~reduce~~ reduce the current  
yet. You must eternally keep it  
getting car lighter. On account  
of using a steel wheel you get  
more tractive bite, far more than a  
chilled wheel, had the steel wheel  
failed to bite, you would have been  
compelled to use a lower carbon  
steel & much softer, in fact as soft  
as the rail then the bite would be  
very great, although your wheel

2  
would have to be renewed  
more often - a soft steel wheel  
gets sand embedded in it & it grips  
strongly.

If you are compelled to heat  
the car, the best thing I can think  
of is 3 or 4 Kerosene burners  
under car giving products of  
Combustion & Extra air through  
gratings on floor of car just  
like floor heaters for hot air  
in houses

a low grade oil can be used  
probably  $7\frac{1}{2}$  to 80 & I think you  
will get all the heat you  
want much more than the  
stoves used now in the little  
cars I have seen.

You will find that on a road  
level the car will like very  
little power if your oiling is ok -  
its the  $\frac{1}{2}$  1 & 2% grades that  
appear level that takes the  
power. You want to be a  
crank on oiling, use it freely  
& see they use plenty = We must  
try & get flooded oiling where  
possible as this reduces friction  
50 to 75% -

Lightness, proper motor for heavy loads  
& Best oiling - are the 3 essentials  
to further improve the car

Σ. B. Swan

1134

Battery, St.

R. H. BEACH  
10 FIFTH AVE.  
NEW YORK  
EDISON STORAGE BATTERY CAR

February 18, 1910.

Dyer J.H.

Mr Thomas A. Edison,  
Fort Meyer, Fla.  
My dear Mr Edison:

I have your very welcome letter of the 12th instant, and note with care what you have to say with regard to the greater bite of the steel wheel; I have no doubt but that you are entirely correct in this, but still there is something else about the peculiar action of this divided axle that we do not know. I am not able to prove my view of the matter, but I feel very confident that there is some relation between the existing tractive force and that we get and the divided axle, which yet remains to be accounted for.

To illustrate: this car will, on an ordinary track, go up a  $\frac{6}{8}$  grade between 56th and 58th streets, without slipping a wheel, whereas the heavy pay-as-you-enter cars, operating over the same track, connected, in the regular manner, with two 50HP motors, and the Brill Maximum Traction Truck, do slip a wheel. I have talked with Prof. Prior of the Stevens Institute, and he is of the opinion that there is some relation between the action of the two wheels of unequal diameter something of this character:— if one wheel happens to have a greater gripe or bite on the track than the other it will, of course, when the power is applied to it, be the last to slip, the one having the lesser pressure slipping first, and it being attached to the first one, adds its momentum to the slip of the second one. I must confess that the thing is not very clear to me, but the fact remains that there is something queer about it. One thing we are all right on---the two motors gives us all the traction we want, and of this I am very glad to inform you.

I note your suggestion as to the use of kerosene burners and have been trying them; from all I can see at present it works first rate, but I have been so very busy lately that I have not had time to try out the kerosene burners thoroughly, and as the season of the year is now approaching when we do not need heat, I think we can let that go until later, and try it out during the summer months. In the meantime I have succeeded in finding a hot water heater complete, including everything and the total weight is only 130 pounds. This seems to be pretty good, although I am trying to get at a reduction of weight, with consistent heat efficiency and durability.

I fully agree with you that we have plenty of opportunity to reduce the current still further; in fact what we do not know about this car would fill a good sized book. The investigation that I have made so far have been very crude, and I believe it really impossible to get any reasonably correct data without automatic recording instruments, and as soon as possible I will get them and put them on the car

TAE.-2.

R. H. BEACH  
10 FIFTH AVE.  
NEW YORK

EDISON STORAGE BATTERY CARS

and let them remain for a considerable time. I want to get a recording watt-meter, and a recording grade meter, as well as a recording speed meter. If we can get an actual record from these three instruments, it should give us the best idea of what we are really doing.

I believe we will also find that we have not got the right motors; we must, by working the motor at the first two steps, add a lot of efficiency, and inasmuch as practically all our work is done on these two steps, I think we should look carefully to this particular point for improvement in the motors.

In the matter of getting the car lighter, I know now where we can reduce the weight by 500 pounds. I do not see how we can do better than that now. Notwithstanding I hope and am striving by considerable effort, to continue to reduce the weight.

I have carefully watched the action of the body, to see if there has been any starting in any direction of the lattice steel girder, which you will remember we placed under the seats, and is really the "meat" of this car body. So far I have been unable to discover the slightest yielding of any of the parts, although I have been driving the car with a bent axle, which of course has subjected it to unusual strains, so much so in fact that it was difficult to stand up in the car when the car was in motion because it swayed so badly. This was done, intentionally of course, to see what the steel girder would do under such action.

One point where I discover I made a mistake: I did not give the axle sufficient end play. In setting the axles into the journals I forgot to allow any end play. This of course made the wheels climb the curves. I wondered about this a good deal, and finally woke up to the fact that I had forgotten to give the end play, but I have finally taken out the thrust-plates, so as to allow 1/4" end play, this being about the usual amount of play trucks are allowed.

The other day Mr Dyer got a letter from our mutual friend Whitridge, which Mr Dyer very kindly referred to me for reply. I enclose herewith copy of my reply to Mr Whitridge, and also copy of his letter to Mr Dyer. Now of course I did not want to offend Mr Whitridge, but there finally comes a time, in such cases, when, in order to maintain your manhood, you have to strike back. For the last month he has been continually saying unkind and untruthful things in regard to myself. I have been particularly careful in any communication with him or his people to remain ever silent or when compelled to talk to say only agreeable things, but it seemed to me finally that the situation had gotten at that point where it required something more serious from me, so I wrote the enclosed letter. In this letter I have told the absolute truth, and I can prove every word of it. I hope the letter will meet with your approval. It is pretty long and I do not know if it is necessary for you to read it, but you will find it interesting if you do read it.

TAE-3.

R. H. BEACH  
10 FIFTH AVE.  
NEW YORK  
EDISON STORAGE BATTERY CARS

About the business: I have sold three cars. Two to Mr Joslyn and one to a company at Springfield, Ills. I think during the next two or three weeks we will sell ten cars to the 28th & 29th Street road. This is a very good place upon which to try out the cars, and where we will learn more than we know about them at this time. I have had a great many inquiries, most of which seem to be of a serious nature, from serious minded people, from which I judge, they really mean to buy cars. They clearly indicate a considerable demand for this type of car, and I really believe that you will find it very difficult to meet the demand for car batteries with your present battery plant, in addition to what you are already doing to meet the demand of batteries for other purposes.

With best wishes and trusting you are enjoying your stay in Florida, I am,

Very truly yours,

Encls.



[ENCLOSURE]

-----COPY-----

THIRD AVENUE RAILROAD COMPANY,  
Frederick T. Whitridge, Receiver.  
130th Street and 3rd Avenue, New York.

February 9th, 1910.

Mr Frank L. Dyer,  
Vice-President, Edison Storage Battery Company,  
Orange, New Jersey.  
My dear Sir:

I have yours of the 8th instant in reply to my letter of the 26th ultimo to Mr Edison. I do not think there is any misunderstanding between me and Mr Beach at all. Mr Beach came to me a good many months ago and proposed that I should try the Edison storage battery on my lines. I told him that I had been a director in the Edison Storage Battery Company for some years as the representative of some of your principal stockholders, and I was quite ready to try the car, provided he would build one and give it to me for experimental purposes and without any expense. I won't undertake to enumerate the number of promises in respects to the delivery of that car which Mr Beach broke, but they were a great many.

Two or three months ago he actually got to work on the construction of a car. My Engineer, Mr Mulleney, was put at his disposition, and I authorized the painting of the car and the equipment of the car with a number of appliances, on the theory that the car was to be delivered to me as soon as completed. About a fortnight ago Mr Beach turned up again and said that he wanted some money, which was not in accordance with his original agreement. I asked him how much he wanted and he said \$6500.00, which I said I would pay. \$2000.00 on his signature to a contract and the balance on delivery of the car. He then asked what sort of contract I wanted, and we discussed the terms, fortunately in the presence of my General Manager, Mr Maher, and Mr Mulleney, and Mr Beach acquiesced in all of those terms; one of them was that I should have the car for a period of sixty days to try out. The next day his attorney sent an agreement up here which was in flat violation of everyone of the terms he had agreed upon the day before.

Under the circumstances, you will perceive that I cannot have any more dealings with Mr Beach, except to collect from him the amount of money which he induced me to spend upon "his" car.

I am going away myself for a few weeks, and if during my absence you should choose to deliver the car here, Mr Maher, my General Manager, will take it in accordance with our original understanding. I may add that it has come to my knowledge that instead of delivering the car to me, as he agreed, Beach has made promises to deliver it to pretty much every one else on earth, and most of the persons to whom he has agreed to deliver it, neither now have, nor to the best of my knowledge and belief, can within any measurable time obtain any considerable sum of money. Of course the fundamental difficulty with Mr Beach was that he misrepresented his position in respect to Mr Edison.

Yours truly,  
(Sgd) F. T. Whitridge,  
Receiver.

Beach---  
Write me what to say  
as to this.  
(Sgd) "Dyer".

[ENCLOSURE]

Feb 16th 1919

Frederick W. Whitridge Receiver  
Third Ave Railway Company  
130th st & 3rd Ave  
City.

Dear sir:

Your letter of the 9th inst to Mr Frank L Dyer V P, Edison Storage Battery Company, at Orange N J, has been referred to the writer for reply.

Your letter seems to require a detailed answer in order to clear up any doubt.

It is unfortunate that it requires many words to make it clear, but it ought to be clear and we can afford to use a few extra words to make it so.

As to any misunderstanding between us:- I do not think that there is any. The original understanding was that you should have the car as soon as it was completed; that was the understanding and all of it.

No details whatever were fixed, agreed upon or even hinted at either by you or the writer.

Your having been a director of the Edison Storage Battery Company is beside the mark and does not enter into this matter.

You say that it was provided that I should build a car and give it to you for experimental purposes without any expense, I presume that you intended to pay expense either to you or to your company on account of purchase of the car.

In this statement you are, not only entirely and absolutely wrong, in that we never, prior to our last meeting, even discussed the question of expense one way or the other or even remotely hinted at it, but it goes without saying that such would have been an unheard of arrangement, the very costly manufacture of the first car and delivery to you for no consideration.

In respect to the delivery of the car:- as to my promises, which you say you will not undertake to enumerate how many I have made and broken, but that they were very many, I beg to say that no promises were ever made, either to you or any representative of yours or your company, in regard to the delivery of this or any other car, by me, except that as soon as possible I would deliver this

[ENCLOSURE]

page 2

car to you, and this promise was, of course, based upon our making a fair and reasonable bargain which you have refused to make or even consider.

You say that three or four months ago that <sup>you</sup> actually got to work on the car.

In fact I was at work on the car more than eighteen months ago and carried on, at much expense, many experiments to determine how to build a car of this character, at the Edison Works where it is well known. The fact that in this statement you have plainly erred is subject to positive demonstration.

You say that your engineer, Mr. Mullaney, was put at my disposition. This is the first time I have ever heard of it. I never asked for him or his services. He did frequently call on me both at my office and at the works while I was developing the details of this last car. He has never made one acceptable suggestion in regard to the construction of the car, its invention or development except to commend favorably the work as it progressed and to send over to me at the works some small supplies which are standard and common to nearly all cars except the two draw heads; he also sent over, at his own suggestion, two painters and the paint for the car.

You say that about a fortnight ago I "Turned up" and wanted some money. This statement while it is true is misleading. It is true that I am always wanting money. The Third Av Railway Company and I are in the same boat in that respect.

The facts in regard to this are:- the evening before the morning of my last visit to you, your Mr. Mullaney called on me at the works and then and there told me that inasmuch as the car was practically ready for delivery as it seemed, and that you had told him that you were anxious to have the car and that he was authorized by you to arrange with me for the delivery of the car and for the payment for it and that you were ready to pay the sum of \$3000.00 at once and upon delivery of the car the balance or \$3600.00.

He invited me to call at your office to close the transaction and I did so.

You asked me how much money was wanted and I told you \$2000.00 and the balance of the payment for the car or \$4600.00 thirty days after the car was delivered.

To this you agreed, but you stipulated that you should have the exclusive control of the car and all others like it or of a similar character in the city of New York and Westchester county for a long period of time.

[ENCLOSURE]

page 3

Your Mr Maher said twenty five years.

This phase of the matter had, never before, been mentioned either by you or your engineer or myself or any other person in any form whatever, as far as I know. I asked you why you wanted such an arrangement, and you said to enable you to make a profit by selling to other roads. I then told you of my relation with Mr Edison and that before any such an arrangement could be made it was necessary for me to consult him. You did most of the talking and as I recall the burden of your remarks was to the effect that Mr Edison was a faker and not to be trusted and other unpleasant remarks of like character, explanatory, probably, of your suggestion of your individual control of the car.

I then left your office in company with Mr Maher, Mr Robinson and Mr Mullaney and went into the office of Mr Maher where the four of us discussed a possible plan whereby such a control as you desired could be given you, but without arriving at any definite plan. Your position as receiver, according to your attorney, Mr Robinson, prevented you from entering into such an arrangement. He suggested that a corporation be formed the stock of which you should hold individually, and with that corporation a contract should be drawn giving it for a reasonable consideration the control you asked for. He consulted on this with another attorney in my presence and repeated such opinion. The day after the conversation above referred to, your Mr Mullaney and Mr Robinson met said attorney and myself in Mr Robinson's office down town and then and there tried for some time to arrive at a plan that would seem to meet your desires. In this they did not succeed, but at Mr Robinson's request it was left for the other attorney to make a proposal, the understanding being that it should be discussed and some sort of workable plan arrived at. The day following your Mr Maher wrote a letter in which was stated that you did not care to do business with me, or words to that effect. I have not the letter before me and so am unable to quote it.

On the day following this I called up your Mr Maher with the idea, which I expressed to him over the telephone, of advising him and did advise him that this proposal from the attorney I refer to was as above stated, i.e. for the purpose of developing a workable plan.

[ENCLOSURE]

page 4

The statement that you did not care to do business with me was enough to end any relations which might theretofore have existed between us .

The next day , or if not , shortly thereafter Mr Mullaney was , to my surprise, at the Edison works and accompanied me and some friends of mine to New York.

My friends left me at 42nd st but Mr Mullaney remained with me to 75 nd st.

At the foot of the stairs to the L road on 72 st and Columbus Ave he said to me that a mistake was made in getting lawyers into the negotiations and that he, personally , would make a proposition . I told him that it would be entertained but he never made any ; instead a few days later Mullaney called on Mr Edison and in my presence requested him to sell to your company batteries for use in street cars. Mr Edison, after stipulating for a profit to be paid on the cars irrespective of the batteries, did agree to this, but stated the cars on which such batteries were to be used should be constructed under my supervision.

Your statement in the first paragraph of the second page of your letter is faulty in that you do not state what the terms were that we discussed. Your implication that it was fortunate that you had your people present as witnesses is unequal for.

Your statement that the specific terms of sale were \$2000.00 down on signing contract and balance on delivery of car is inaccurate, but it is true that you did agree to pay down \$2000.00 and the balance 30 days after the delivery of the car.

Your letter clearly shows a faulty memory . In clause 2 in the latter portion of it you say that you were to have sixty days in which to try out the car , and in the fore part of the same clause you say that you were to pay for the car on delivery. Both could not be true.

Now as to the collection of the amount due to your company. Payment for that is ready, but the largest item on your bill, which I have just received in detail, is a charge for \$350.00 for engineers services. This will not be paid or even seriously considered. Your engineer was never asked to do anything in the construction or development of this car in any manner whatever except to have it painted , which he offered , and to send over to the shop a few small , and I think , standard parts such as bolts, fare registers etc, the one exception to this

[ENCLOSURE]

page 5

was the making by your company of two forged draw heads.

I am now returning to you the fare register and when it is received by you kindly credit the same on your bill and you will be sent the amount due, but under no circumstances, will payment be made for engineers services which were never had or asked for.

Now as to your dealing with me.

I desire to say that if you desire to use this battery car you must deal with me. The ~~exclusive~~ right to construct a car on the lines and embodying the mechanical contrivances used in this car is exclusive and they are fully protected by rights that are indisputable. I have no absolute control of Mr Edison's battery and never claimed to have such a right, on the contrary I told you I did not have such control. The car and its many features that go to make it a successful thing are in one control.

Without the divided axle, so far as we now understand the art, it is impossible to secure a sufficiently high economy of current in a street car to permit the use of any battery. Again the method of commutation is so highly advantageous that any railway operator would be justly subject to adverse criticism who did not use it.

I personally regret, for your sake, that you <sup>are</sup> compelled to deal with me in case you desire to use this kind of a car but such is the case.

I can assure you that I shall, at all times do my best to meet the receiver of the Third Ave Ry Co in a spirit of fairness and to deal equitably with him and the interests he represents, to whom I believe this car is at present known and the subject of serious consideration.

As to the amount of money in possession of the ~~indefinite~~ persons referred to in your letter, I have no knowledge. There are definite persons favorably impressed with the car outside of the receiver of the Third Ave Ry, who have demonstrated their complete financial independence.

Mr Whitridge, you are the receiver of the Third Ave Ry, an important railway system. You have given much satisfaction to its owners and I believe you will continue so to do. People dealing with you are dealing with them and they so deal in the belief that you are capable of performing and will perform, with

[ENCLOSURE]

page 6

the single idea of doing for creditors , bondholders and stockholders , all that lies within your power and that your individuality and personality are not , at any time , a consideration when their interests are concerned. The individuality of the owner <sup>of the car</sup> should likewise be negligible.

I wish you would think this matter over calmly and let us try and meet as reasonable men.

You seem to overlook the fact that in undertaking this important work Mr Edison and I were not trying to make one or a dozen cars to sell to some one for the little profit there might be in it, but to actually advance the art, and it now looks as though we had succeeded .

In doing this the public is benefitted and as to the profit well, I suppose, like most pioneers some other fellow will get that.

I hope that you will , as a broad minded man that I believe you to be, look at the real importance of this undertaking and not at some small part of it or listen to small talk from or by irresponsible people whose ambitions are liable to mislead both you and them.

Very respectfully

Copy to Mr Edison  
Dyer.

✓  
Walden  
Like confidentially -  
Don't let Beach see  
Edison

R. H. BEACH  
10 FIFTH AVE.  
NEW YORK  
EDISON STORAGE BATTERY CAR

Dears -

Note about 1000, I have said  
nothing to him about it;  
use your own judgement -  
March 16, 1910.

Mr Thomas A. Edison,  
Fort Meyer, Florida.

My dear Mr Edison;

In reply to your favor of the 6th instant; enclosed you  
will please find detailed report of the performance of the car during  
the days from the 2nd to the 6th of this month, both inclusive. The  
calculation showing the WH consumption at bus-bar I have put in my-  
self, based on the efficiency of the battery at 62%. I did this be-  
cause the arrangement for charging was so crude, that it was impossible  
for us to get any accurate records. The discharge recorded is accurate.  
We had in a Thompson Recording Wattmeter. The readings were taken at  
each trip. We also had in a Voltmeter and an Ammeter to check it and  
also a recording Ammeter. They all check up. There is no doubt but  
that the recording watt hour meter result is accurate. Our mileage is  
correct. Our time is correct. The weight I am compelled to estimate.  
I think the weight is correct, or nearly so. Of course it is constant-  
ly varying; sometimes the car would contain 50 people, and sometimes as  
low as ten, and I have seen it as low as four, but think it fair to say  
that the average total weight was about seven tons.

The track conditions are extremely bad; they are bad in  
this respect: the track is very dirty. That is the track is made  
so by the general street traffic, and there are not enough cars pass-  
ing over it to keep it clean. I notice there is a great deal of dirt,  
or if the weather is wet, of mud, which forms a sort of film over the  
surface of the track at all times, whereas on Broadway and other streets

TAE-2.

where the car traffic is more frequent, the track surface is comparatively clean. This is of course against us. Also we have 49 curves in the 4.77 miles. In 36 of these curves the car enters the curve and stops on an up-grade. This is also against us. The method of handling the car by the motormen is just exactly as the trolley cars are handled. The tendency is to run on the third step, and in spite of all we can do to keep them on the first and second step. I have no doubt but that as time goes on we will gradually get the motormen to realize the importance of starting more slowly. This ought to help us on current consumption.

If you will note the enclosed performance record you will see that during the first four days run the current consumption per ton mile and car mile is considerably greater than the last day. I was very much worried over the low mileage that we got, and watched the car closely. I noticed the break shoes were wearing more than they should, but could not at first locate any structural defect. On the night of the 5th however I made a very careful examination of the break rigging, and found that in between the spring, which releases the break and the break shoe itself, there was an accumulation of dirt, which forced the shoe out from the spring and up against the wheel, so that the break shoe was really kept touching the wheel all the time. My attention was attracted to this by the sluggish action of the car. As soon as I discovered it, I took off the break shoe springs, depending upon gravity for release, and the immediate results was an increase in mileage per charge, and decrease in current consumption per car and ton mile. The car responded well and we got good acceleration on the first and second step of the controller, whereas before removing these springs, we could not accelerate on the first, and not very well on

TAE-3.

the second step. It seems a foolish thing not to have observed this before. You will perhaps not recall the break shoe rigging; the action of the shoe moving back and forward is not unlike that of the jaws of a Blake Rock Crusher jaws. The opening was widest at the top, and as little particles of dirt and mud would fall into this opening, and the movement of the shoe, back and forth, would gradually work the dirt and mud down into of the wedge shaped opening and pack it. We found it packed so very tight that it was like cement.

The record which I enclose was made by an independent engineer in the employ of the 28th & 29th Street Line, a Mr O'Gorman, whom I do not know, but he seems to be a very intelligent engineer. Great care was taken to get accurate records, and I believe they are accurate.

I think it is fair to form your opinion of the performance of the car from the run of the 6th, because it was really the first time the car was run under what you could call fair conditions, so far as the break is concerned. Assuming the cars condition on the 6th to be its normal condition, the watt consumption per ton mile would be 75.7.

I think you are perfectly correct in assuming that we are very faulty in the motor design. I am quite sure that we are still very faulty, and I look confidently to getting a very much more efficient motor, not that the motor itself will be efficient, but that we will get a better average efficiency by rearranging the voltage of the motor. I have three different firms at work on it now.

I note what you say about lighting, and will abide by it.

I would be very glad to use the A8 battery if you think it possible to do so, as it helps me out with more room in the car. Billie Bee seems to think it is the real thing. If you would like to give it a test on heavy work, we will take out the A4 and put in a set of A8 and give them a test. To do this I would need 100 cells. I can

TAE-4.

arrange this any time you wish.

Yesterday we had our first accident that amounted to anything. We broke an axle. You will recall that I wrote you that we bent both axles while we had the car on the Belt Line. One of them was bent out of alignment about  $3/4$ ". The bend was right at the hub of the wheel. We straightened this axle cold, and put it into service again. Yesterday morning about ten o'clock, at the corner of Seventh Avenue and 29th Street, it parted, at the same point, at the hub. It was a sheer break. The break appears to be highly crystalized. Whether there was a fracture in the axle I cannot tell; whether the diameter of the axle is too light, I do not know, but think possibly it is. It is  $2-3/4$ " in diameter. I am having a new set made of  $3-1/4$ ". I expect to get them in by Saturday. I think perhaps I had in a steel too high in carbon, and am now putting in a lower carbon steel, made by the Taylor Iron Works.

In a general way the railroad people are very much pleased with the car. It has appeared in the main to be very satisfactory. /11 of the men about the place like it. It handles well, and on the whole I think we are safe in saying that the car is commercially successful.

Of course there are a number of little things about it that are not quite satisfactory; one of them is the noise in the body. I have not succeeded yet in finding out exactly what makes this noise. It may be the domed shaped roof. I think this is the trouble. Also the springs are a little too stiff. I am putting in softer ones. The stiff springs makes the body vibrate. The noise is not particularly objectionable, but it is more noisy than other cars.

The car has been taking in about \$20.00 per day, as against \$4.00 per day for the horse cars.

TAB-5.

I am receiving a great many inquiries from contractors and mining people who want a small locomotive. What would you think of developing a small locomotive for hauling say ten to twelve little cars, carrying about a yard of dirt each? The total distance would not in any case exceed a haul of one mile, and we could take a truck and put on four motors, getting a good tractive effort, and it would not cost very much to try it out. I do not see any reason why we should not do it, and if you think it a good idea, I will go ahead on the scheme. There would be quite a wide use for such a locomotive; especially with the contractors. The particular case in point is up on the Ashakon Dam; they are compelled to move their track every week or so, and that prevents their putting in a trolley, and a little storage battery locomotive would be very convenient for them. They would want twelve locomotives.

Very truly yours,

(Encls)

R.H. Crook,

*Collected address "Edison's New York"*

*From the Laboratory  
Thomas A. Edison,*

*Orange, N.J. March 12-1910.*

Beach =

Think your axle broke because you  
haven't enough fillet at wheel - also too high  
carbon. I thought they used charcoal iron  
for axles.

Your  $3/4$  will increase friction of journal 18% -  
but probably only 5 @ 8% of whole car.  
Keep them well oiled; better use Standard  
Oil men. They have a R.R. dept + experts +  
I believe, could reduce friction to 60 watts  
by their special oil.

It Billy Bee agrees you can  
substitute 100 "A 8" for the 200 "A 4"

Edison.

*you*

*Call Address "Edison, New York"*

*From the Laboratory  
of  
Thomas A. Edison,*

*Orange, N.J. Mar. 12-1910.*

Beach:

Another thing has occurred to me -

without the springs are flexible, the sharpness  
of the blows on the axles are much increased.  
I called your attention to the poor spring you  
had. Better see the experts + change the  
springs and don't forget the fillet.

Softer springs  
will diminish  
transmission of  
noise to body also  
C.



Can't have a fillet too large or gradual  
on an overhung bearing.

Edison

*Carl F. Schoder*  
SPECIAL DELIVERY  
SUITE 500 CUMMIS BLDG.

3/14/10

*✓*  
*Am*  
*Beach*

The Edison Company,  
Montic, New Jersey.

Gentlemen:-

I have been greatly interested in your new storage battery and have followed the public press on the subject, very closely.

Myself and associates are contemplating the construction of an electric railway in the State of California.

I will be very pleased to receive any advance information or data you can furnish on the storage battery proposition and especially relative to railroad work.

Would it be possible to secure the Pacific Coast rights for the use of your battery, provided we could organize a company of sufficient capital to handle it?

I give you as reference the Merchants National Bank, Los Angeles, Ocean Park Bank, Santa Monica, California, Broadway's and Dun's.

Awaiting your reply, I beg to remain,

Yours truly,

*Carl F. Schoder*

CFO-13.

By \_\_\_\_\_

MR. DYER:

MAR 21 1910

We have sent this party a catalogue, and have also told him that we are not in a position to consider the agency or selling rights proposition, and will not be for at least a year.

W.G.B.

Mr. Ed. Hand

Harry

Ans<sup>d</sup> received  
March 17-1910

Keep Copy of Everything  
I send to Beach

S

R. H. BEACH  
10 FIFTH AVE., TEL. 1322 GRAMERCY  
NEW YORK

BEACH STORAGE BATTERY CARS  
(USING EDISON STORAGE BATTERIES)

March 28, 1910.

Mr E.L.Dyer,  
Vice-President, Edison Storage Battery Company,  
Orange, N.J.

Dear Sir:

Regarding the small locomotives; I am having a number of inquiries for small locomotives, equipped with Edison Batteries. Technically the detail of these locomotives is almost the same exactly as the street car. We would use the same truck as in the street car, except that it would be modified slightly to meet the varying conditions. I can very readily work out a locomotive that would do the trick, and I think we really ought to do it. A case in point now is for the contractors at Ashokan Dam. They want two locomotives. A Mr Kinsley is the party in question. He desires two locomotives to haul 500 tons of dirt per day of ten hours. This would require about 40 A-8 cells, with a car which would be built on practically the same lines as the truck in the present street car. A platform would be placed on top of the truck, to carry the batteries with a seat for the motorman. We would use the same method of drive that we have developed for the street car, and in general the details would be the same as though the device was to be used in a street car.

I can do this all right if it is agreeable.

Yours very truly,

*R.H. Beach*

R. H. BEACH  
10 FIFTH AVE., TEL. 1322 GRAMERCY  
NEW YORK

BEACH STORAGE BATTERY CARS  
(USING EDISON STORAGE BATTERIES)

March 26, 1910.

Mr F.L.Dyer,  
Vice-President, Edison Storage Battery Company,  
Orange, N.J.  
My dear Mr Dyer:

In reply to your letter of the 23rd instant in regard to foreign business; it seems to me that if we send over to Bergmann at Berlin just the inquiries as received, that he will find it extremely difficult to handle them, owing to the fact that he cannot know the details of these cars.

Now the fact is that the success we are enjoying with the battery on this car is due to two things; first, that we have an excellent battery; second, the economical use of current by the car.

It is possible that you do not know that this car really takes, for driving, only about one-third the current required to drive an ordinary car of the same seating capacity. Mr Bergmann's engineers will naturally doubt this statement, but it is a fact just the same, and it seems to me the right way to go about this proposition is for either Mr Bergmann, or one of his engineers, to inform themselves on this subject.

In regard to the patent situation, application for these patents were made long before the publication of press notices took place regarding the car, and I am advised by Mr Small and Mr Smith that we are protected under the International Treaty for sufficient time to make our applications in other countries, which

FTD-2.

we are getting ready to do.

Of course we will be very glad to make some equitable arrangement with Mr Bergmann for use of these devices in any territory he wants.

If you care to have me do so, I will gladly send over to Mr Bergmann full details as to the construction of the car and full data as to its operation, and will take up, either through you or directly with him, the matter of getting him posted fully.

We have had a number of inquiries; one from New Zealand, one from Italy, one from France, one from Turkey, one from England and several from Mexico and other central and south American countries.

Yours very truly,



R. H. Borch,

R. H. BEACH  
10 FIFTH AVE. TEL. 1382 GRAMERCY  
NEW YORK

BEACH STORAGE BATTERY CARS  
(USING EDISON STORAGE BATTERIES)

March 28, 1910.

Mr F.L.Dyer,  
Vice-President, Edison Storage Battery Company,  
Orange, NJ.  
My dear Mr Dyer:

In reply to your favor of the 26th instant I note what you say in regard to the use of the curve showing comparative tests of the A and E type of battery.

If you will look over the copy of my letter herewith addressed to Mr Carl P.Schoder, you will note exactly the form in which I wish to use the information contained in the curve as advertising data. Of course it would be necessary to vary the wording according to the circumstances, but in a general way I would say to prospective customers that the experience on the battery is that on expiration of so many complete discharges, the battery had actually shown the increase in the percentage indicated in the blue print. I would not make any reference to the E battery, because it would have the effect of confusing the buyer, who knows nothing about it.

I can see no objection to using the data in this manner, but on the contrary there are many advantages.

I would call your attention to a subject which ought to be taken up at once, it seems to me, as we are now approaching the time when we will begin to sell cars. Some sort of guarantee should be provided; I have talked the matter over with Mr Dodge and he is of the same opinion. I do not mean to suggest that the works should make an unqualified guarantee. But it does seem

WLD-2.

to me as though the Company should make a reasonable guarantee as to the life of the battery, qualified of course by the requirement that the instructions for use of the battery are strictly adhered to.

I know of Mr Edison's objections, and they are very good objections. At the same time you can hardly expect large users to spend large sums of money purely on our word.

I do not see how any unfair risks would be taken by the Works in offering to its customers a fair guarantee, and one which they know absolutely they can meet, provided of course the battery receives at all times proper care and operation.

The worst thing that could occur would be that the customer would claim that his battery would not do the work. Our position then would naturally be that he had not followed instructions. It would then be incumbent upon him to show that he had followed instructions, and this would be an extremely difficult thing for him to show, if the battery had failed. I make this suggestion because it is the bad thing that we will necessarily have to meet some day.

I cannot see how it would be possible for the user of the battery not to get the good results which we are all getting, provided he did follow instructions; therefore the risk in making such a guarantee along those lines, would be extremely small.

On the other hand it would give us great advantage in the market.

Yours very truly,



(Encls)

[ENCLOSURE]

-----C O P Y-----

R. H. BEACH  
10 FIFTH AVE. TEL. 1822 GRAMERCY  
NEW YORK

BEACH STORAGE BATTERY CARS  
(USING EDISON STORAGE BATTERIES)

March 28, 1910.

Mr Carl F. Schader,  
Suite 500, Currier Bldg.,  
LOS ANGELES, CAL.

Dear Sir:

Your favor of the 14th instant addressed to the Edison Company, Menlo, N.J., has been referred to the writer for reply, in which please note that I refer only to cars for street railway or interurban service. My connection with the Edison Storage Battery Company is effective only insofar as the Battery is applied to street cars.

Regarding the sale of these cars in your territory, we are not yet in position to make agency arrangements, but would be pleased to furnish you cars, and will cheerfully furnish you with such data as will enable you to form an opinion as to this method of car propulsion, as compared with other methods.

You will find enclosed two reprints, which gives a fair description of the 26-passenger car. This car is now in daily operation on the 28th & 29th Street Crosstown Line in this city. The car is in service in a very congested district, and under extremely unfavorable traffic conditions. It makes regularly 62 miles per day, or per charge of battery, over a track in which there are 46 curves, and a constantly varying grade up to 2-1/2%. The car averages about eight stops per mile. In such car performance the current consumption at bus bar is 863 watt hours per car mile.

In the operation of this car we have met with no diffi-

[ENCLOSURE]

CPS-2.

culties whatever, either in structural design or principle of propulsion, and while the car is light, as it necessarily must be to operate economically with storage batteries, no defects of any kind have developed.

The car accelerates readily, at the rate of about one mile per hour per second, which is the usual rate of acceleration in all street cars.

We feel that we are warranted in stating that the problem of driving street and interurban cars with storage batteries has been solved.

The question of durability of the battery will naturally arise in your mind; inasmuch as the battery has not been in commercial operation for a great number of years, we cannot advise you definitely on this point. We do know, however, from actual experience with the battery in commercial service, that at the expiration of 30,000 miles the battery in this car will have increased in capacity about 11%. From actual experience with the battery we cannot state what its performance will be beyond the 30,000 miles mentioned, but from various tests and demonstrations that have been made to determine the life of the battery, it is the opinion of the Factory engineers and Mr Edison that the battery will last a number of years; probably ten to fifteen years.

However, owing to the fact that the positive life of the battery is unknown, we recommend to our customers to arbitrarily charge off 15% per annum from the original price of the battery, (which in this case is \$13.50 per cell or \$2835.00 per set). The fund thus reserved you would naturally retain as a sinking fund for the purchase of new batteries, in the event of their failure

[ENCLOSURE]

CFS-3.

at the end of seven or eight years of service, a condition, however, not likely to arise. This inflicts no especial burden on railway earnings, because a similar or much larger amount would have to be expended, from time to time, if the road was equipped with a trolley system. To put this to you more graphically; the sinking fund thus provided, where battery cars are used, would amount to \$0.00.15.50 (1-1/2 mills) per car mile, whereas the State of Massachusetts reports, for example, that the average expense of ~~maintaining~~ maintaining the overhead trolley lines, on all electric roads in that state, amounts to \$0.03.05.00 (3-5/10 cents) per car mile. The latter item of course varies considerably, but is as authentic and characteristic, for comparison, as could be obtained.

The advantages in service of the storage battery car are obvious; there is one advantage, however, which may not appear to you upon first consideration, and that is the lessened cost of power production. By use of these cars you get a very much higher power factor on your operation. It is extremely difficult to get better than a 50% power factor with trolley cars; with battery cars on a system properly managed, you should get at least a 90% power factor. That is your horse power would be reduced, approximately of course, by one-half, and the power cost considerably reduced due to the high power factor of a system operating the storage battery cars.

It would be well, if you contemplate construction of a road, to let us have a plan of the system; a rough sketch will answer the purpose, and we should know the mileage, schedule and maximum speed requirements, number of cars, grades and length of same, curves, number of stops per mile, passenger capacity of cars,

[ENCLOSURE]

CPS-4.

and location of power plant.

Upon receipt of this information we will very cheerfully  
work out a definite proposition for you.

Yours very truly,  
(Sgd) R.H. Beach.

Encls.

Battery St.

April 5, 1910.

R. H. Beach, Esq.,  
10 Fifth Ave.,

New York.

Dear Mr. Beach:

Yours of the 26th ult. has been received in reference to foreign business. Under the International Convention you have, as I remember, one year from the date of the filing in this country in which to file applications abroad. I think, however, that we will have difficulty in obtaining patents in Germany, because the German patent office is extremely illiberal, but of course there would be no harm in trying.

In view of the inquiries you have received, it might be well to apply for patents in Great Britain, France, Belgium, Germany and possibly Austria, but I would hardly advise you to go outside of these countries, and as it is, the applications would be filed purely as a speculation, with the chances very much against your making anything out of the patents.

Regarding Mr. Bergmann, I wish you would let me have full data concerning the car so that I can write him and put him thoroughly in touch with the situation. All of these foreign inquiries can then be turned over to him, and if he thinks the matter is important enough he might actually make a demonstrating car. No one is better equipped than he to do this. Of course, in turning this matter over to him it would be with the understanding that as soon as possible some fair arrangement should be

(2)

made under which the proposition could be handled by him. I  
take it for granted that he would be willing to take up the matter,  
although, of course, he might not be.

Yours very truly,

FLD/IWM

Vice-President.

Battery, 34.

1134

April 5, 1910.

Mr. R. H. Beach,  
15 Fifth Ave.,

New York.

Dear Mr. Beach:

Yours of the 28th ult. has been received in reference to the curve sheet showing comparative tests of "A" type and "B" type batteries. I think the statement you make is sufficiently guarded to be safe. In every case attention might be called to the fact that the curve represents the work of an Edison battery, which you believe to be typical and you have every reason to believe that as good results may be expected from all of the batteries when proper conditions are observed as to their use. From my point of view, however, the statement you make in your letter of March 26th to Mr. Schader is too broad. You give the impression that for at least 30,000 miles we are absolutely sure of the results. Is this so? Has Mr. Edison ever been absolutely and finally certain as to this point? You also say that Mr. Edison believes the battery will last probably ten to fifteen years. Is not this also too broad a statement? I have always understood from Mr. Edison that he expected a probable life of five years and possibly considerably longer, but I never knew that he regarded ten or fifteen years as probable. When you consider the ridiculously short life of the lead battery there is no need of making too extravagant claims for our battery until we are absolutely sure of the results. *Yours truly*

Barney, NY.

1124

April 5, 1910.

Mr. R. H. Beach,  
10 Fifth Ave.,

New York.

Dear Mr. Beach:

Yours of the 28th ult. has been received on the subject of small locomotives. You might go ahead with this matter in a tentative way and outline your general plan and perhaps by that time Mr. Edison will have returned so that it can be taken up direct with him. Offhand it seems to me that the problem is quite different from a street car, because in the case of a locomotive in order to get the desired traction I should think you would require a good deal of weight, and that is the very thing you have to avoid in street car work. Is there anything in this possible criticism?

Yours very truly,

Vice-President.

END/INW

Made memo. on letter from  
Barney of 4/4/10 to go ahead  
with drawings.

1134

Battery, New York

R. H. BEACH  
10 FIFTH AVE. TEL. 1382 GRAMERCY  
NEW YORK

BEACH STORAGE BATTERY CARS  
(USING EDISON STORAGE BATTERIES)

April 8, 1910.

Mr F.L.Dyer,  
Vice-President, Edison Storage Battery Company,  
ORANCE, N.Y.  
My dear Mr Dyer:

Replying to your favor of the 5th, I am glad you approve of the statement I made regarding the comparative tests. The position we are in regarding statements about the battery, I think you will agree, is a very difficult one.

I suppose none of us who are familiar with the operation of the battery and its construction have any real doubt, either as to its capacity or as to its ultimate life being reasonably long, but the fact that we do not really know about this makes our position an extremely difficult one. Of course we should not make any statement that is not true.

On the other hand the prospective customer naturally wants to have some idea as to what he is buying; you know that the price of the battery is very high; at this time that is not a very serious matter, or would not be of any great consequence if we could give the buyer some reasonable hope that the battery would last him long enough to warrant him in paying the high price.

My position is somewhat different from that of the other salesman, because I am selling street cars; they are selling automobiles. They compete with lead batteries; I do not compete with lead batteries. I compete with trolley cars, and the estimates of relative costs which I am compelled to make, the buyer necessarily

FLD-2.

compares, item for item, with the trolley car conditions.

With this battery I am really entering a new field and am trying to educate the buyers up to the idea of adopting storage battery street cars; of course I have no idea in the near future of inducing any great number of men to do this, but here and there, as time goes on, I think I will succeed in getting these cars into service.

So that the temptation for me to make statements that might be regarded as a little extravagant is very great. Naturally I am enthusiastic about the battery and sincerely and firmly believe that it will perform splendidly. My ideas are based upon what the battery has already done.

Take for instance the curve sheet which you have and which shows 476 complete charges and discharges; I believe it would be fair to call it 500 complete discharges, which the battery has probably arrived at by this time. Taking the car mileage which I know we can make per discharge and under the very adverse conditions here in New York, which is 80 miles and multiply this by the number of discharges and we would have 40,000 miles. Now the average number of car miles which ordinary cars make per annum is 15,000. Converted into years, and assuming the above figures to be correct, the battery would actually drive the car 2.542 years or two years, one hundred and twenty-five days, at the end of which period the battery would be about 10% greater in capacity than when first put into service. Now in reality this would not be an extravagant estimate, and it is based on actual experience.

The question seems to be: should we actually state this as a fact, or should we wait for a while longer, and state meantime that this represents the work of the Edison Battery which we believe to be characteristic. Right here seems to come the rub. If we say that

FID-3.

we believe this to be a typical performance we express a doubt which the buyer will see immediately and probably magnify.

Now I do not want to make any statement which is not true, as I have stated to you heretofore, but I do want to be able to state the facts and I would very much like you to know what statements I make about the battery.

Now in regard to the statement to me by Mr Edison, as to the expected life of the battery, I do not remember Mr Edison's exact words, but several times he told me that he expected the probable life of the battery to be very long, probably ten to fifteen years. I did not say to Mr Schader that the battery would last that long; neither did I intend to convey the idea that Mr Edison said it would last that length of time. I intended to convey the impression that, from various laboratory experiments, Mr Edison thought the battery would probably last that long. Of course the word "last" is an indefinite expression, and unfortunately it is a thing we have to deal with at this time as to the probable life of the battery. That is our misfortune. I will avoid using that expression hereafter, however, of Mr Edisons', as I can appreciate how it might be misconstrued into a promise. I think your criticism is a good one.

About the letter from Mr Whitridge I will write you more fully on Monday. I want to consider carefully what I had better do about this matter: oftend it strikes me the attitude taken by Mr Whitridge is really foolish. As a matter of fact I have never, either by word or deed, done anything that he could reasonably take offense at. The whole trouble with Mr Whitridge arises out of two causes; one is, the engineer he has deceived him, and the other is that Mr Whitridge is a very "fussy" man and greatly impressed with the sense of his own

FID-4.

ability. I have no doubt he is a man of great ability.

Naturally I hesitate to turn the car over to a man that feels unfriendly towards us. Where the car is now the people are very friendly; they like it. They are anxious to have it and more of them.

It is true the service conditions on the 28th-29th Street Line are very bad, but that is good for us; if we have bad conditions to meet and overcome them then we have accomplished something. To make this clearer to you: the track over which we are now working is an unusually bad track. It jolts and jars the car much more than would be possible on any track of the Third Avenue system. That is just exactly the kind of track we need, in order to teach us where the weak points are in the structure. You will appreciate that if we work under ideal conditions it would require a very long time to develop our weaknesses, whereas if we work under unfavorable conditions of track and traffic, we discover our weaknesses very quickly. For instance we broke axles on three different occasions; this was due to the bad track, but it has taught us where the axle was weak, and if on a smooth track it is altogether probable we would not have broken an axle, and would therefore not have known where the axle was weak, and we might, and probably would, have gone ahead and turned out a great many cars with bad axles, then put them on bad tracks and broken a whole lot of axles, whereas, in the present service, we have only broken a few axles, but have learned, within a short time, how to provide the proper axles for these cars.

I will write you more fully with regard to Mr Whitridge on Monday.

Yours very truly,

*R.H. Dooly*

*Battery Storage*

R. H. BEACH  
10 FIFTH AVE. TEL. 1382 GRAHERCY  
NEW YORK

BEACH STORAGE BATTERY CARS  
(USING EDISON STORAGE BATTERIES)

April 19, 1910.

1134  
Mr Frank L. Dyer,  
Vice-President, Edison Storage Battery Company,  
Orange, N.J.

My dear Mr Dyer:

Replying to your favor of the 18th instant regarding Mr Bergmann's letter of the 1st (which I return herewith), the following are the facts about the car:

The reprint enclosed gives a detailed description of the construction of the carbody, truck, electrical equipment, etc. The operating details I regret to advise I cannot at this moment give you more in detail than below:

The car was put into regular service on March 2nd, on the 28th & 29th Street Crosstown Railway. Since that time it has been in regular service. We have broken three axles, though on that point there is no use considering the matter as it has no bearing on the general operation of the car.

Aside from that the car has operated continuously and is making regularly <sup>mile</sup> 46.75 per day or per charge. We have made a number of counts and the average is about 8 stops per mile. The average current consumed per car mile (and this average was arrived at by very close observation) is 853 watt hours in-take into the battery. The output of the battery averages 529 watt hours (at motors) per car mile. We get quite a wide range of current in the discharge. Ordinarily the car takes on the first step of

FED-2.

controller, 60 amperes at 50 volts, accelerating at the rate of 1 mile per hour per second. In 5 seconds the car is running at 5 miles per hour, but when running at 5 miles per hour, or at the end of the first 5 seconds, it drops to 20 amperes, the voltage remaining at 50. On the 2nd step, the acceleration remaining at the same rate, the current rises again to 60 amperes with a voltage of 100, but at the end of the next 5 seconds, the current has again dropped to 20 amperes. On the 3rd step, maintaining the same rate of acceleration, the current rises to 160 amperes, the voltage remaining at 100. At this point the car is making 15 MPH, and while maintaining this speed on a level track, takes about 50 amperes. I say "about" 50 amperes, because it is extremely difficult to get any average information in regular running. Variation in track conditions, as well as variation in service to be performed, render it extremely difficult to get any really accurate data, but the above is very close to what the car is actually averaging in regular service.

Now as to current consumption per car mile, you will be able to inform your correspondent that it is very low. This is due to the peculiar car drive and construction of the truck. By the use of the chain drive we maintain in the same direction of rotation in the armature and the driven wheel, therefore all moving parts of the car are moving in the same direction simultaneously, which is quite favorable to its action, in coasting. Much more so than if in the reversed direction, as would be necessary with the ordinary gear-pinion drive. This is a very noticeable feature of these cars. Ordinarily, running on a level track, the car will have the current on for perhaps one-fourth of the time; the balance of the time it will run without current. This is particularly advantageous

FED-5.

in city traffic; and accounts in part for the long mileage that we get per charge of the battery.

This car goes out at 6 in the morning and remains out until 8:30 in the evening, moving almost constantly. Stops are seldom over 10 or 15 seconds duration.

I have had a study of the car made by the engineers of the Lynn Works of the General Electric Company, who have made a very exhaustive study with very elaborate recording and measuring instruments, but I have not yet received their report; I expect to receive it now at any time, and will be very glad to send you over a copy when received.

However, the two principal points in the car construction are the chain drive and the differential axle. Those are the principal improvements. So far as the body is concerned, it is very light.

I am pleased to be able to advise you that while the car has been subjected to very unfavorable conditions, frequently carrying 50 or 60 passengers and over a road, on which it is almost "criminal" to operate upon, at no point in this car body has the slightest deflection of any character developed. It is just as true and rigid as the day it left the shop. I feel sure this is due especially to the lattice-girder construction, which we use under each seat, forming a backbone, as it were, to the car and holding it right up to the very severe stresses and work performed with this car.

You may state to Mr Bergmann that as soon as we have complete data, upon which the engineers are now working, we will very cheerfully furnish same.

Regarding information furnished to other foreign points, beg to advise that no information has been furnished or will be furnish-

FLD-4.

ed to European parties, for the present at least, except to Mr Marshall at London; of course we have received a great many inquiries from various European countries, but we have simply replied in a general way, enclosing one of the reprints such as you find enclosed herewith.

Yours very truly,

(Encls)

RH Birch

JAS. B. BROWN.

**JOBBERS:**  
OILS,  
PALE TIES,  
SEWER PIPES,  
STONE WARE,  
GRASS SEEDS,  
HARDWARE,  
MACHINERY.



*battery, st.* F.H. BROWN.

*Hillsboro, Ill.* April 20, 1910.

Mr. Thos. A. Edison,

South Orange, N. J.

Dear Sir:

I should like to have you advise me what I should write to regarding the Beach Edison Storage Battery for street cars. We want to take this matter up with a view of ordering cars equipped with this battery and any information you can give me will be very greatly appreciated.

Yours truly,

GEO. W. BROWN, JR.

JPB/BH

*then we can answer it*

*E*

*Edison*

*Explain to  
particulars*

Battery, NY

1134

April 26, 1910.

Mr. R. H. Beach,  
10 Fifth Ave.,  
New York.

Dear Mr. Beach:

I have at last succeeded in disposing of our New York office on a lease taking effect not later than May 15th, and it will therefore be necessary for you to move as soon as possible.

Let me know what you would propose to do, whether to stay in New York or possibly to come out here. I have not had time yet to discuss the matter with Mr. Edison and do not know what his views are, but possibly he might be willing to have you come out here if you thought you could handle your proposition from Orange. At any rate, let me know what you think should be done for your own interest and I will then take up the matter with Mr. Edison.

Yours very truly,

FLD/IWW

Vice-President.

1134

Battery, St.

R. H. BEACH  
10 FIFTH AVE. TEL. 1382 GRAMERCY  
NEW YORK

BEACH STORAGE BATTERY CARS  
(USING EDISON STORAGE BATTERIES)

April 28, 1910.

*W. L. Dyer*

Mr F. L. Dyer,  
Vice-President, Edison Storage Battery Co.,  
Orange, N.J.  
Dear Mr Dyer:

Replying to your very kind letter of the 26th about an office; I have been looking about to find a suitable place, and will move probably between the present date and the 5th proximo; at any rate surely before the 15th of May.

About going out to Orange; I would be delighted to do so, would much prefer to go there in fact, were it not for the fact that nearly all of my work is here. The first thing we have on hand is to sell some cars, and then when it comes to building, we build the bodies here, and assemble out there, so that I believe, everything considered, it is better to remain in Manhattan.

I am looking about between 23rd and 42nd Streets; rents are lower up there and the location seems convenient for my purposes. I have in mind that you might perhaps like to have someone from the Storage Battery Company, possibly Mr Bee or Mr Doty, have desk room with me, and I will certainly keep this in mind when I engage offices. You need expect to pay anything for it, because you have been good to me, and I will most gladly return the compliment in this way.

Yours very truly,

*R. H. Beach*

1434

May 5, 1910.

Mr. Geo. W. Brown, Jr.,  
Hillsboro, Ill.

Dear Sir:

Your favor of April 30th to Mr. Edison on the subject of the use of the Edison battery for street cars, has been referred to me, and I have taken the liberty of referring your letter to Mr. R. H. Beach, who is at present occupying quarters in our New York Office, No. 10 Fifth Ave. Mr. Beach has been doing considerable work in designing and developing a car especially adapted for the Edison battery and a number of Mr. Edison's ideas are embodied in this car. Mr. Edison's only connection with Mr. Beach is to the extent that in case the car is developed to a satisfactory point we will furnish him the necessary batteries for use with the same. Apparently the tests which Mr. Beach is making and which have been very extensively referred to in the press have been quite successful, and I have every reason to believe that the car in his charge will be developed to an entirely satisfactory and commercial extent.

Mr. Beach no doubt will furnish you with complete data regarding his car and will be glad to answer any questions relating to the same.

Yours very truly,

Vice-President.

*But - Beach*

R. H. BEACH  
10 FIFTH AVE. TEL. 1352 GRAMERCY  
NEW YORK  
BEACH STORAGE BATTERY CARS  
(USING EDISON STORAGE BATTERIES)

May 18, 1910.

Mr Thomas A. Edison,  
Orange, N.J.

MAY 19 1910

My dear Mr Edison:

Some time ago, as you know, the Gould Battery people furnished a battery to the Third Avenue Company for use in their battery car; they put in 40 cells, with a total weight of 3,200 lbs and an ampere hour capacity of 420.

They have had a ~~great~~ many different varieties of trouble with this battery; on charge the battery rises up to 127 degrees Fahrenheit; I do not know the temperature on discharge but it is over 100 degrees. With the batteries under the car, <sup>just</sup> as they have them arranged, it is very difficult to give them the necessary ventilation while charging.

The Third Avenue Company tried to induce the Gould people to furnish these batteries on a car mileage basis, and the Gould people have positively declined to do so. Now the Third Avenue Company are taking out the Gould battery and are negotiating with the Exide people to furnish batteries on a car mileage basis, and their proposition, or at least the proposition they are now working on (which it not yet definitely settled), is to furnish batteries with a weight of 4000 lbs, ampere hour capacity of 420, upon a guaranteed cost per car mile of 7%.

My information comes from what I believe to be a fairly reliable source.

Yours very truly,

*Our Car is working  
every day just the same as usual*

*RH Beach*

Ans 9/27/10

Palo Alto Cal 5/20/10

Mr. Thos A Edison Orange N.J.

MAY 26 1910

Dear Sir: Your form of the  
5<sup>th</sup> inst duly recd -  
also catalogue of storage  
batteries - for which accept  
thanks - But I have  
received no word from  
Mr R H. Beach <sup>+10-5<sup>th</sup> Ave</sup>  
N.Y. City - whom you  
say operates the cor -

Yours very truly  
J. Bell  
Over

B4352

P.S. please attribute your method  
of introduction of the storage  
batteries in U.S.

[ON BACK OF PRECEDING PAGE]

Battery-TAE

Say that we referred your  
letter to Beach & do not  
know why he does  
not answer —

We will most of the  
batteries to the manufactory  
of Trucks & Passon Vehicle  
& considerable numbers  
to Garrages to replace  
Lead Batteries —

5

—COPY—

B A R C L A Y , & C O M P A N Y

Office: 26-28 Beaver St., NY.  
W-House: 44 Stone St., ~~Stam~~ NY,  
Factory & Laborat: Bayonne, NJ.

New York, May 27th, 1910.

Federal Storage Battery Car Co.,  
50 Church St., New York.  
Gentlemen:

In reply to your inquiry regarding Mr Lee J. King of Rio de Janeiro I have much pleasure in stating that he has come to us with the very highest endorsements from our own resident agent in Rio, who is a careful and conservative man.

According to our agent's report, Mr King is in New York to obtain the Brazilian agency for various firms of this country, and counts upon a long experience in Rio together with ample financial support. I quote to you from a private letter to me from our representative regarding Mr King: "As to his financial condition, I may state that apart from his resources, he can command the use of any capital that may be found necessary to carry on any business he may take hold of, whatever its size may be. As to his personal qualities, I know him to be an energetic, thoroughly honest and fully capable man, being therefore splendidly equipped to do justice to any line that may be entrusted to his care."

The letter also states that Mr King has considerable influence in Brazil, and I should judge that his services would be very valuable to any concern seeking an agent in that country.

The above is given of course, without responsibility to me, and I beg to remain, Gentlemen,

Yours very truly,

(Signed) R.G. Barclay.

*Battery, storage*

FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF

EDISON STORAGE BATTERIES

"BEACIA CARS"

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EDISON STORAGE BATTERIES

Mr Thomas A. Edison,  
West, Edison Storage Btry. Co.,  
ORANGE, N.J.

My dear Mr Edison:

A gentleman by the name of Lee J. King, for many years connected with

The General Electric Company and later with Messrs. Guinle & Co., at Rio de Janeiro, Brazil, has come to New York and he wishes to represent us in Brazil with the idea of selling cars.

He gave me for reference officials of the American Locomotive Company, William Guinle Co., Barclay & Co., etc. The American Locomotive people advise that Mr King was at one time one of the Managers at Rio for Guinle & Co., that he impressed them very favorably on the occasion of the visit of one of their officials to Rio, and that they found he was in good standing there, had a very wide acquaintance in Brazil and should make us a good representative. William Guinle Co., advise the same. The firm of Barclay & Co., is a very old and reliable concern here, and I enclose copy of their reply to my inquiry about Mr. King.

We ought to be represented down there; of course on a commission basis. Mr King would also like to have the sale of your batteries for other uses; he is a gentleman of excellent address and the letters from Barclay & Co., and others speak so well of him that I feel much disposed to give him the agency for the cars.

It would seem to me that in those remote countries, where the market is necessarily limited anyhow, that he ought to have the agency for the batteries also. If you feel disposed to take the matter up with Mr King, I will be very glad to bring him over to see you, or send him to Mr Dodge as you prefer.

Mr King is very well informed generally as a business man and he is an electrical engineer, and seems altogether suitable for an agent; I therefore take pleasure in recommending him to you, and can say that if you decide to give him

TAB-2.

agency for the battery, I will give him the agency for the car, and we might make some arrangement for him with trucks from Lansden and get him a good account with Bailey and Anderson; such a combination would give him something worth while to work on, and I really believe he would get some profitable business for all concerned.

Yours very truly,

A handwritten signature in dark ink, appearing to read "R. B. Beach". The signature is written in a cursive style with a large, sweeping "B" and a long, horizontal flourish extending to the right.

(Dict. by Mr Beach)  
(Encls)

Battery, St.

FEDERAL STORAGE BATTERY CAR COMPANY

PERSONAL.

Mr Thomas A. Edison,  
ORANGE, N.J.

My dear Mr Edison:

1134  
*Walter*

MANUFACTURERS OF  
"BEACH CARS"  
EQUIPPED WITH  
"EDISON STORAGE BATTERIES"

1778 HUDSON TERMINAL  
50 CHURCH STREET  
PHONE 3356 CORTLANDY  
NEW YORK CITY

June 12, 1910.

I am glad to be able to advise you that the Third Avenue difficulty seems to be solving itself in a manner that is favorable to us. As I have previously informed you, I believe, Mr Edward A. Mahar is the only practical rail-road man in the outfit, and he is our friend; I do not know that he is particularly our friend so much as he is a friend of that property and he is intelligently and conscientiously trying to improve the property. He has sense enough to know that by doing that he also helps himself. He is not at all friendly to Mallaney. Mr Mahar has been elected President of the road. It was supposed, as a matter of fact by the adherents of Mr Whitridge that Whitridge would be President. The election has occurred and Mahar is President and in command. This is altogether in our favor.

If I have not already told you, I now tell you that Mr Mahar has given us an order for one car and assures me that they will want a great many. He puts the number at 150, and the time during which they will purchase them sometime during the next two years; he thought they would begin to purchase them within the next six months.

I tell you this but suggest that you keep the matter strictly to yourself, as it would be unwise, I think, for the information to get out, at least for the present.

Yours very truly,

*Walter Brook*

PERSONAL.

Mr Thomas A. Edison,  
ORANGE, N.J.

My dear Mr Edison:

FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF  
"BEACH CARS"  
EQUIPPED WITH  
"EDISON STORAGE BATTERIES"  
1775 HUDSON AVENUE  
50 CHURCH STREET  
PHONE 1000  
NEW YORK CITY

June 11, 1910.

There is just one thing which I would like you to do which you can do and which it seems to me you certainly ought to do; it would help materially in selling these cars. That is, I want the use of your name. I spoke to you about it once before, but you seemed to think it was not a good thing. Naturally you hesitate in permitting the use of your name. From the experience you have had in that respect I do not know that I blame you very much.

But as a matter of fact I have made good; I have built a successful car and I am going to make it more successful and keep overlastingly at its improvement no matter how perfect or acceptable it may be to the railway profession. Like all things electrical and mechanical this car is a thing that will always afford opportunity for improvement.

I have paid my way, have not borrowed any money from you, do not owe anybody that I cannot pay, can pay for anything I get, have plenty of capital to do the work with more where that came from, and I am very surely going to build this into a big business, and I want to call these cars the Beach-Edison Cars.

Whether we call it the Beach-Edison car or not the world calls it that anyhow, and there is no way that I know of that will prevent the general public from continuing to call it the Beach-Edison Car. If you will note the various clippings from the technical and lay press throughout the United States and even foreign countries, you will find the reference is invariably to the Beach-Edison Car or the Edison-Beach Car.

Now Mr Edison it seems to me this is not very much to ask of you. It is

Battery, St.

Beach Edison

JUN 13 1910

TAK-2.

distinctly to your benefit, because it helps me so much to sell the cars.

I do not care anything about the glory, but it is necessary in this world to call things by some name, and that is in reality the name of this car, and if you say that it is all right it will help a whole lot. If you do not allow it, of course I will not use it under any circumstances but everybody else will use it.

I know of nothing you need be ashamed of, and as a matter of fact dont you think you ought to be proud of it? There never was a street car that worked as economically and consistently as this car works, and I thought you would be proud to have your name hooked on to it.

You do not need to write me a letter about it; just tell Miller to call me up on the 'phone and say that "it is all right".

Very truly yours,

*RAH Beach,*

REFER TO THIS NUMBER  
IN YOUR REPLY

1675

1134

Battery St.

FRANK L. DYER,  
ORANGE, N. C.

MEMORANDUM

June 17, 1910.

Mr. H. F. Miller:-

Mr. R. H. Beach, in a letter to Mr. Edison, of the 11th inst., refers to the use by him of a little red shed in which he wishes to have two doors cut by Mr. Edison. He wants to know what rent he shall pay for the use of this shed and Mr. Edison suggests \$20. per month. I have written Mr. Beach to this effect today. I wish you would find out how long Mr. Beach has occupied this shed and charge him at this rate, and also make a note of the fact so that he may be charged \$20 a month so long as he occupies the building. The understanding is that Mr. Beach will be allowed to occupy the building so long as we do not need it.

F.L.D.

FLD/ARK.

Battery, St.

1134

FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF  
"BEACH CARS"  
EQUIPPED WITH  
"EDISON STORAGE BATTERIES"

*Indica*

Mr Thomas A. Edison,  
Orange, N.J.

June 25, 1910.

My dear Mr Edison:

JUN 27 1910

1770 HUDSON TERMINAL  
80 CHURCH STREET  
PHONE 3396 CANTLAND  
NEW YORK CITY

I enclose herewith copy of letter from Mr Baxter L. Brown, Chief Engineer,  
East St Louis, Columbia & Waterloo Ry., St Louis, Mo. This letter is peculiarly  
pertinacious because of the fact that the Mr Haynes referred to therein is President  
of the East St Louis & Suburban Railway Company, a very important concern, operating  
some 200 cars. Mr Haynes is also President of a bank and a prominent man in St Louis  
affairs. Being from Missouri I had to show Mr Haynes. He came here full of skepticism  
and although, judging from his attitude when he came here at first, he did not really  
take much stock in our claims, I did not talk to him very much; I judged him to be  
a man to whom the more I said the less he would believe. I told him therefore to  
go and see the car and ride on it, alone, or with anyone he pleased, and to talk to  
the motorman, the conductor or to anybody he could find that knew anything at all  
about it. The result of Mr Haynes's visit you can judge largely from the contents  
of the letter, per enclosure.

In addition thereto, after Mr Haynes made his investigation he returned  
to my office and told me that the problem of economical transportation of passengers  
on the surface of the streets was very greatly improved by our system of car propulsion,  
and that there was no question but that in the course of time his road would get down  
to this method of propulsion of their 200 cars.

As stated above, I am very much gratified to have converted such a hide-  
bound, tight fisted and hardheaded old fellow as Haynes, and I thought you would  
like to know about it.

Yours very truly,

*RAH Douch*

ENCLOS.

[ENCLOSURE]

-- COPY --

East St Louis, Columbia & Waterloo Railway,  
Baxter L. Brown, Chief Engineer,  
610 Merchants Building,  
ST LOUIS, MO.

No. 16540

June 23rd, 1910.

Mr. R. H. Beach,  
No. 50 Church St.,  
New York.

Dear Sir:

Referring to recent correspondence relative to storage battery car and more especially to your letter of June 11th.

Mr. Haynes has returned from his trip East and has reported the result of his meeting with you and examination of the car.

I am all the more convinced that the 50 passenger car will prove to be better adapted to our business, but under the circumstances would be pleased to have you present formal proposition for one of the 25 passenger cars subject to trial on the rails of the East St Louis & Suburban Ry. It is important that we get this car at an early date, as we hope to have the road ready for operation in the fall and all the questions concerning equipment and power will have to be held up pending a definite decision on this point.

I understand from Mr. Haynes that you are not prepared, just at this time, to state a definite price or date of delivery on the 50 passenger capacity cars but would be pleased to have you advise me approximately on these points. I judge that we would require three of these cars in order to start regular operation or we might be able to operate for a short time with one 25 passenger car and two of the larger ones.

Am pleased to state that Mr. Haynes report, in general, is quite favorable.

In looking over the printed matter which you have sent me, as well as the correspondence, I don't see any mention made as to how you propose to heat the cars. With the batteries occupying all of the space along the sides of the car I don't see any chance to locate in a stove there and with the entrance in the centre at the ends there is no opportunity there for a stove.

Yours truly,

(GDD) BAXTER L. BROWN

*Ed - Beach*

FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF  
"BEACH CARS"  
EQUIPPED WITH  
"EDISON STORAGE BATTERIES"

Mr Thomas A. Edison,  
Orange, N.J.  
My dear Mr Edison:

*Beach  
you might  
show a crate  
of batteries*

HUDSON TERMINAL  
20 CHURCH STREET  
PHONE 3355 CORTLANDT  
NEW YORK CITY

July 1, 1910.

*Ans 7/5*

We started to work out a regular catalogue, the same as everybody else has been going out, and we are still at work at it, but it takes so much time, the printers and engravers delay and disappoint so much that it has crowded us to get it out, so we decided to get out 100 booklets, just like the one I am sending you herewith; will send you over a bunch of them the first of the week; being real photographs they are a little expensive—they cost about \$1.50 each or per book, but even so that is better than waiting so long, and being photographs this gives the impression to a man seeing the booklet for the first time that the car is the real thing.

You will not by looking over this booklet the pictures show the car working under various conditions, and as our business develops we can readily add to the booklet such additional photographs or data as occasion requires. For instance the first picture shows yourself working the car in the snow; this answers questions very frequently received as to how the car works in winter and snow. The second pictures the same. The third picture shows the detail of the interior. Other pictures following show the car under various conditions of track and traffic—at curve, congested corners of Broadway, Fifth and Fourth Avenues, at the ferries of the East and West Side, and characteristic conditions we meet in operating the car through down town New York streets. The views showing famous buildings and thoroughfares in themselves are very interesting and make the car lifelike. This strikes me as being very much better than the ordinary form of catalogue, at least for our purpose. Following these pictures you will note the reproductions of the line drawings, from which you will note the changes and additions for the new cars. There is shown the change in the motor suspension, the distance rod

FAE-2.

that we are adding, as well as the new bearings, etc. I am very sure that in these we have effected a very decided improvement. From the end view shown you will note a slight change in the lines of the new cars; this is better and it gives a wider aisle.

Following the photographs is a performance sheet and on the last page is the price list.

If you think it is a good idea, I will add a couple of photographs of the batteries; probably this would be a good thing to do—if you think so please let me know.

Yours very truly,

*R. S. Beach*  
*8*

ENCLOS.  
Dict. by Mr Beach.

Battery St.

1134

July 12, 1910.

Mr. R. H. Beach,  
1779 Hudson Terminal Building,  
New York City.

Dear Mr. Beach:-

I must apologize for not making an earlier reply to your letter of June 11th to Mr. Edison, but I have been away a good deal recently and it seems to have been overlooked.

Mr. Edison cannot permit you to use his name in connection with your car and you should make all reasonable efforts to prevent the public from associating his name with it. So far as the public is concerned, it is simply the Beach car equipped with Edison batteries. There are many reasons why I would most strongly advise Mr. Edison in this matter not to permit his name to be used, but the important one to my mind is that Mr. Edison will not allow his name to be used in connection with any enterprise except those in which he is directly interested and for which he feels a certain sense of personal responsibility. You would be surprised to know how many similar requests we are constantly receiving, and should an exception to the general rule be made in your case, it would be difficult to explain why it should not be made in all cases. I hope, there-

#2 - Mr. R. H. Beach.

fore, that you will do nothing to perpetuate the connection of Mr. Edison's name with your car, and in referring to it make it perfectly clear that Mr. Edison's only financial interest in your enterprise is in supplying you with batteries so long as he is satisfied with the way the business is handled.

Yours very truly,

FLD/ARK.

Vice-President.

1134 *Battery St.*  
FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF

"BEACH CARS"

EQUIPPED WITH

"EDISON STORAGE BATTERIES"

Mr. P. L. Dyer,  
Vice-President, Edison Storage Battery Co.,  
ORANGE, N.J.

179 HUDSON TERMINAL  
50 CHURCH STREET  
PHONE 3358 CORTLANDT

July 26, 1910.

Dear Mr. Dyer:

NEW YORK CITY

*W. H. M.*

We have your favor of the 27th in which you quote from letter of Mr. C. L. Hester, San Francisco. I am pleased to be able to advise you that we have communicated fully with Mr. Hester. A brief history of the matter is this:-

Mr. Hester wrote us first in regard to the matter on June 29th, enclosing a map and some data as to grades, etc., but did not give us the schedules, number of cars required or any idea as to the number of passengers to be moved. We requested this information, but did not get anything from him until receipt of his letters of July 19th and 20th. We now have ample data, have advised him fully, and as soon as we receive some more information which we have requested as to the amount of traffic at "rush hours" and some idea as to the time and duration of the "rush hour" business, will submit detailed and formal estimate and proposal.

The difficulty with Mr. Hester is that in this street railway work he does not understand or appreciate how necessary it is for us to have minute data; you will understand that in making a bid on a car, or a number of cars, we have to know all about the service to be performed, the speed, the grades, the curves, approximately the number of stops per mile, the speed on grades, load to be carried, average and maximum speed required, etc., and all details in order that we may lay out car adapted to the specific requirements.

This we have endeavored to impress upon Mr. Hester, and I believe he now understands that we must have the detailed information.

You will appreciate that it is different with the battery car than with a

FLD-2.

trolley car.

In this instance of the Geary Street Line in San Francisco, it is a very difficult proposition. The line is made up entirely of grades and while, from the information which we have at hand, I am inclined to the belief that we can build a car that will do the work all right, we do not propose to take any chances on it; that would be equally as bad for the battery as for the car, and you may be very sure that if we prepare an estimate and take the contract, we will be on the safe and sane side.

Next time I am in Orange I will be glad to come in a let you know what progress we are making. It is not out of place to state meantime that we are making very good progress.

Yours very truly,

FEDERAL STORAGE BATTERY CAR COMPANY,

*R. H. Beach*  
*S*

11/34  
BATTERY, ST.  
FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF  
"SEACH CARS"

"FEDERAL STORAGE BATTERIES"

770 HUDSON TERMINAL  
80 CHURCH STREET  
HOBOKEN, N. J.  
NEW YORK CITY

Mr. Thomas Addison,  
Orange, N. J.  
My Dear Mr. Addison:

August 3, 1910.

*If this is the first letter we see by all means*  
*Protect*  
*McCauley*  
I am this morning in receipt of the letter from Robert A. Lawrin, 2106 O'Farrell St., San Francisco, Cal., of date July 18, addressed to the Mayor of West Orange, by him referred to you and by you referred to me. Mr. Lawrin wants a lot of information about these battery cars for San Francisco, and I am very sure that the information he wants is for the same proposition that Hester is handling out there. The question occurs to me, are we doing the right thing by Hester in giving this information to Mr. Lawrin, a man whom we do not know; therefore before giving the information to him I have requested him to advise us who he is.

I rather think that the situation in San Francisco is developing in our favor; yesterday a Mr. Halliday, brother of the head man of the United Railways of San Francisco, called here also to find out about the car, and he also wants to butt in and help sell these cars. I judge from appearances that it is getting to be rather commonly understood in San Francisco that the City is going to buy these cars, and naturally every body wants to butt in and make something out of it.

I feel that we ought to protect Hester very fully, and as just waiting for him to get the situation ripe, so that once it is in proper shape to close, I will go out there myself and close up the contract. Meantime I have written Mr. Lawrin per the enclosed copy, and I return herewith his letter as requested.

Yours very truly,

*W. H. Booth*

Battery, St.

FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF

"SEACH CARS"

EQUIPPED WITH

"EDISON STORAGE BATTERIES"

1775 HUDSON TERMINAL  
50 CHURCH STREET  
PHONE 1386 CORTLANDT

NEW YORK CITY

AUG 4 1910

August 3rd, 1910.

Mr. Thos. A. Edison,  
Orange, N. J.

Dear Sir:-

We have just received some of the booklets from the printers, these being a reproduction of the booklet of photographs of which you have copies, with the addition, however, of a very good half-tone of some of the Battery Cells.

We have had these printed so that we can add other pages of cuts and data, either printed or typewritten from time to time as occasion offers, without the expense of publishing an entirely new booklet.

We are sending a copy of this booklet to every street railway Company in the country and we also have a reliable list of people who have secured franchises or placed bond issues for the construction of new electric railways, to whom we are also sending copy of the booklet and to both the established companies and those in the course of organization, we are sending personal letters, giving data and information specifically applicable to the conditions and requirements of each particular road.

We anticipate very favorable results from this campaign.

Very truly yours,

FEDERAL STORAGE BATTERY CAR COMPANY.

*R. H. Seach*  
S

S/rb

*When you get a supply send me 50 Edison*

*1134*

B.S. *gun*

*Copy*

Mr Robert A. Laurin,  
2106 O'Farrell Street,  
SAN FRANCISCO, CAL.

August 3, 1910.

Dear Sir:

Your favor of the 18th instant to the Mayor of West Orange, N.J., was referred to Mr Thomas A. Edison, and by him to us for attention, as we are the manufacturers of the Storage Battery Cars.

Under separate cover we are today mailing you booklet in which you will find answer to all of your questions. Before quoting you price, we would thank you to advise us with reference, or references if possible, in order that we may know with whom we are dealing.

We have an agent in your City, and perhaps it would be better for you to call on him, as he is prepared to give you all of the information that you require; his name and address is:- Mr C.E. Hester, 612 Shreve Building, San Francisco, Cal.

Yours very truly,

FEDERAL STORAGE BATTERY CAR COMPANY,

Copy to Mr Edison,  
" " " Hester.

*A.H.R. C. W. G.*

**FEDERAL STORAGE BATTERY CAR COMPANY**

MANUFACTURERS OF  
"BEACH CARS"

EQUIPPED WITH  
"EDISON STORAGE BATTERIES"

1779 HUDSON TERMINAL  
80 CHURCH STREET  
PHONE 3356 CORTLANDT

NEW YORK CITY

Mr. Thomas Madison,  
ORANGE, N.J.

Dear Sir:

August 3, 1910.

We received today from you the enclosed letter sent you by Messrs. Minchin & Son, of Townsville, Queensland, Australia, asking for information about the cars, and on account of the very excellent references they offer and the prospect for business in their territory, we have seen fit to offer them the agency on a tentative arrangement, for Queensland, per the enclosed copy of letter to them of even date. We have taken copy of their letter.

Yours very truly,

FEDERAL STORAGE BATTERY CAR COMPANY,

*R. H. Beach*

E.B.

*Beach note*

I object to your stating such a large overcharge rate as also to life of battery - if you state 4 or 5 times the rate under proper conditions a ~~car~~ & life 5 years at least it will be O.K.

AUG

*do not want you to overstate things to him - moderate statement - we will select the car -*

[ENCLOSURE]

MINEHAN & SON,  
CIVIL ENGINEERS AND AUTHORISED  
SURVEYORS.

PETER MINEHAN, C.E.,  
LATE DISTRICT ENGINEER  
GREAT NORTHERN RAILWAY, Q.  
ENGINEER AVE TRAMWAY,  
JOHN MINEHAN, A.E.,  
M.G. INST. E.

SPECIALITY: RAILWAYS AND TRAMWAYS.

16/2  
Callaghan, Battersea, N.  
Melb.  
Townsville, N.S.W. June 1910.

Say that I don't know after the  
Cars but only furnish battery  
for them that I have referred  
- battery storage battery -  
City tram  
Cars & the well do not do any more

Thomas A. Edison  
from them - Then send to  
Dear Sir Beach & Co. that has been  
the Municipal Council of this

City & Townsville have at present under  
consideration the "installation of Trams"

Our Mr. P. Minehan has visited the latter  
place also Ipswich & Rockhampton on  
behalf of the Townsville Council & reported  
to said Council on the system of Trams  
now in use at Rockhampton.

We should like to have the honour to  
act as your Representatives for "Storage  
Battery Cars" in Queensland.

References - Bank of North Queensland  
Secretary - Queensland's Agent General London,  
Railway Department Queensland  
Yours faithfully,  
P. J. M.

MINEHAN & SON

P.J. M. will give you a full  
particulars of the  
storage battery cars.

[ENCLOSURE]

*Copy*

Messrs. Minahan & Son,  
Civil Engineers,  
Townsville, Queensland, Australia.

August 3, 1910.

Gentlemen:

Your favor of the 18th ultimo to Mr. Thomas A. Edison, relative to cars equipped with the Edison Storage Battery, has been referred to us for attention. Under separate cover we are today mailing you booklet with illustrations of our car No. 1 in regular service, this city, together with reproductions of lines drawings of construction details of the car, and also copy of Performance Sheet covering operation in regular service of Car No. 1 in this City for a period of three months, as well as an illustration of five of the Edison Storage Battery cells. We are also sending you description of the Edison Battery.

We are now building and selling cars as described in the booklet, and during the late fall will have out a double truck, 50 passenger car, on which we will be pleased to quote you price and furnish detail within a few weeks.

However, the single truck car, with seating capacity for 26 passengers and standing capacity for 15 passengers, would probably be more suitable to the conditions you have at Townsville. These cars have a maximum speed capacity of about 18 miles per hour, but to operate at that speed it is desirable to lengthen the wheel base from 6 ft. 6 in., as at present to 9 ft. 9 in. With maximum battery capacity of 105 cells of the A/8 battery, such as described in the booklet we are sending, these cars have a capacity of from 75 to 100 miles per normal battery charge, according to the condition of track, traffic and schedules. The Edison Battery, however, will withstand without injury short charges of

[ENCLOSURE]

McDon-2.

15 to 30 minutes duration, at about eight <sup>4 or 5 times</sup> or ten times the normal charging rate, so that if it is possible, in the course of the regular car service, to let car stand <sup>occasionally during the day</sup> and take charge for these short periods of time, at the high rate, sufficient current may be taken into the batteries to operate the car for from ten to fifty miles in addition to the mileage capacity from normal battery charge. The normal charging time is seven hours.

In a great many cases, such large battery capacity is not required, in which case we furnish cars with a smaller number of the A/c cells, or with the A/c cells, thereby eliminating weight and the expense of moving that extra weight through the streets, and also reducing the price of the car.

If you will advise the length of the road at Townsville, grades, if any, and length of grades, curves, stops per mile, with speed capacity and seating capacity needed, stating whether you would need closed body cars with longitudinal seats, as described in the booklet, or open body cars with transversal seats, and advise as to the location of the power or charging plant, and also whether you would be able to take current from some lighting or electric plant already established, or intend to establish an independent plant, especially for supplying power to these cars, we will be able to go into the subject more intelligently and will be pleased to furnish you with detailed information as to best process of operating our cars in your service, and also send you detailed estimate and proposal covering the cars you need, and specifically adapted to your service.

On pages 11, 12, 13 and 14 of the booklet you will find detail drawings of the car construction, and you will note several devices rather novel and altogether unique in electric railway car construction. We employ a divided axle arrangement, which permits car to move around curves without the excessive friction and power loss of cars with rigid axles. We use chain instead of gear driving device, this making the ~~driving~~ gear practically a roller bearing. We

[ENCLOSURE]

Mason-3.

find the saving in power consumption, due to this chain drive, is considerable, and that the chain wears even better than the ordinary gear/gear drive. We use roller bearings in the axle journals and ball bearings in the motor journals, both of which eliminate friction and consequently economize in power consumption. In construction of the car body we have eliminated all useless weight in materials and fixtures, as we have accomplished also in the truck and other portions of the car. The car weighs complete only 10,000 lbs. We have <sup>saved</sup> a large amount of dead weight rather by careful elimination of useless materials and fixtures, commencing with the constantly vibrating trolley pole and heavy roof, and careful selection of materials used with maximum strength, thereby preserving the accepted factor of strength and durability, than by sacrificing strength, and the workmanship and design is even better than usually obtained in electric railway car construction. You will also note the lattice steel girders that primarily serve as battery receptacle, but that also act as a sort of "back bone" for the superstructure, side and underframing of the entire car body.

From the experience we have had in producing this car, we are very certain it is not possible to make a car suitable for propulsion by storage batteries without the numerous devices and methods of construction which we have described herein in part.

The Edison battery can be left to stand in a charged or discharged condition for any length of time without injury, it may be overcharged or overloaded, to any reasonable extent without injury and it retains its charge except when in actual operation. The upkeep cost and maintenance is extremely low, the only care being required is the addition of distilled water every other day or so, and changing and renewing of electrolyte, which consists of caustic potash and distilled water, about every eight months, all of which is very inexpensive. This battery will last for many years. *10 years at least* The exact number of years we do not know because we have not had them out long enough to know when they will give out. From laboratory tests and experiments, however, which are ordinarily reliable, we assume they will last from twelve to fifteen years at least. They are very

[ENCLOSURE]

1230m-4.

simple of charging and operation, and altogether reliable in service.

Basing our calculations upon data from a number of electric railways, and in a general way, we find that there is a saving of about 33% in cost of construction and installation and in operating expenses and all fixed charges there is a saving of about 33% also, comparing a given system equipped with our cars as against the system equipped with trolley cars of the same capacity.

We have no objections to appointing you as our agents in Queensland, whereby we will cooperate with you as far as possible, paying you a commission on all sales you make or made through your intervention in that territory, the amount of the commission to be determined at the time of the sale, and based upon the volume and circumstances of the sale. In a general way we would be willing to give you ten percent (10%) commission, but cannot now make the amount of sales commission definite to cover all cases, but in each case will be glad to advise you, in advance of sale, the commission you will be allowed covering each sale. This to be effective as long as we are satisfied that you are advancing our interests in your territory, and we to have the right to revoke this arrangement whenever we feel that our interests are not being properly advanced by you in your territory.

Of course what we seek is orders for cars, and doubtless if you send along some orders, we will find it desirable to make a more permanent arrangement with you.

The price of the cars as described in the booklet, with full battery equipment, complete in every detail and ready for operation, is \$6500.00, free alongside ship, this city.

We will be glad to hear from you further.

YOURS VERY TRULY,

FEDERAL STORAGE BATTERY CAR COMPANY;

(Sgd) R. H. Beach

1134

Aug. 6, 1910.

R. H. Beach, Esq.,  
Hudson Terminal Building,  
New York.

Dear Mr. Beach:

Mr. Edison wishes me particularly to take up with you the matter of your letter to Messrs. Minchan & Son of Townsville, Australia. He has already written you objecting very strenuously to the exaggerated statements you make concerning the possibility of overcharging and the life of the battery. He wants me particularly to emphasize that under no circumstances should you make any exaggerated statements, which can only do harm in the end. We are not selling mining stocks and do not have to make a single exaggerated statement. Every statement we make is within the bounds of practical certainty, and, while the results may show that we have been too conservative, it is much better to be safe than to have exaggerated statements later on brought up and end in disputes. I hope you will bear this point always in mind and remember that the Edison battery is so much better than any other battery that moderate statements are all that is necessary.

R. H. B.

(2)

8/6/10.

In the present case I think in fairness to these correspondents of yours that you should write them pointing out that by an oversight these statements are probably stronger than you would care to make and change them to accord with Mr. Edison's views. They certainly would not think any the less of you if you did this, and if you had business relations with them in the future and your statements were shown to be too broad you might have an unpleasant time ahead of you.

Yours very truly,

FEB/INW

Vice-President.

FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF  
"BEACH CARE"

EQUIPPED WITH  
"EDISON STORAGE BATTERIES"

August 8, 1910.

Mr F.L.Dyer,  
Vice-President, Edison Stg.Bat.Co.,  
ORANGE, N.J.

1775 HUDSON TERMINAL  
80 CHURCH STREET  
PHONE 3355 CORTLANDT

My dear Dyer:

NEW YORK CITY

Replying to your favor of the 6th; I am very glad indeed to have your criticism. Permit me, however, to impress upon you a thing which probably you already know: i.e. the difficulty under which we labor in selling these battery cars. The one principal point which the prospective buyer wants to know about is the probable life of the battery, and that is the one thing that no body knows.

On page 3 of my letter of August 3rd to Kinoham & Son., I state very plainly that the exact number of years that the battery will last we do not know, but from laboratory tests and experiments which are ordinarily reliable, we assume it will last from twelve to fifteen years. It does not seem to me that this is an exaggerated statement. If it is I am glad to know it and will not use it hereafter.

You must bear in mind that when a man buys these cars the cost of the battery is a comparatively small portion of the total cost of his railway, but the balance of the property, which amounts, roughly to several times the cost of the battery, is equipped and designed especially for the use of the battery, and if the battery fails then his total investment would be lost. What I am trying to do is to convey to the buyer or prospective buyer that in making this investment he is not incurring any abnormal risk. I will see Mr Edison within a day or so and will endeavor to get this one point definitely understood and fixed.

In the street railway business it is impossible to compare this battery with any other battery; the buyer would not use any other battery in any event. Any intelligent man would not think, for a moment, of installing cars and a

a complete railway equipment, with all the expensive apparatus incident thereto, adapted to the use of lead batteries. Our position is to induce our customers to use our battery system instead of a trolley system, but with us the question of the lead batteries never enters into consideration, as in the automobile business.

Consequently, if you will reconsider the matter and try to put yourself in the position of the buyer, you will appreciate perhaps how important it is not necessarily to guarantee anything, but to have some reasonable hope that at the expiration of three years, or any other short period of time, the battery will not fail.

As a matter of fact it is true, or at any rate we believe it is true, that if the battery did fall down at the end of three years, and the owners was compelled to buy a new battery, his battery car would still be cheaper than the trolley, but if we present our case to the prospective buyer, with this condition of affairs confronting him, we would doubtless find it difficult or impossible to interest him.

I have endeavored in all of our correspondence, of which there is a very extensive amount, to convey the exact truth, and I believe that my letter to Minehan & Co., conveys only the truth.

On the point of overcharging, I state on page 5 of the letter to Minehan & Son that the matter may be overcharged to any reasonable extent without injury. Is not this true? I have always understood that this was the real point of the battery.

On the point of short charges, Mr Holland told me that the battery would take for short periods of time charges at eight to ten times the normal rate. I have a letter from Mr Edison, under date August 4th, in which he objects to this and says that if we state the battery may be charged at four or five times the normal rate, and the life of the battery, under proper conditions, will be five years, it will be all right. We will hereafter change our correspondence to conform

FLD-3.

to Mr Edison's letter.

Of course you understand that in dealing with a thing of this character, the exact life of which is not known, it is extremely difficult to say just the right thing. Of course we are anxious to sell the batteries, and yet we do not want to misstate the facts; unfortunately, however, we do not know what the facts are. We are really compelled to say something. If we say too little it is worse than saying nothing, and we are invariably asked how long will the batteries probably last.

How would it do to get together and talk this thing over and determine upon a statement which we can use in our correspondence in the future; something that will meet with Mr Edison's approval and at the same time give us a fair show?

Will you kindly discuss the subject with Mr Edison, and I will come out one day this week.

Yours very truly,

A handwritten signature in dark ink, appearing to read "J. H. Beach", with a long, sweeping underline that extends to the right.

B.S

August 9, 1910.

R. H. Beach, Esq.,  
Hudson Terminal Building,  
New York City.

Dear Sir:

Your favor of the 8th inst. to Mr. Dyer has been received, and I note that it is your intention to come out to Orange one day this week. Mr. Dyer is away at the present time but will be here Friday and Saturday for specific business. He will no doubt be here a part at least of next week, but it might be well to telephone before coming out so that he will be here to go into the matter with you.

Yours very truly,

IWW

Private Secretary.

**MINEHAN & SON,**  
CIVIL ENGINEERS AND AUTHORIZED  
SURVEYORS.

PETER MINEHAN, C.E.,  
LATE DISTRICT ENGINEER  
GREAT SOUTHERN RAILWAY, G.  
JOHN MINEHAN, A.S.,  
M.O. DIST. S.

SPECIALTY: RAILWAYS AND TRAMWAYS.

*Dyer*  
Townsville, 15<sup>th</sup> Sept 1910.

REV 32 1910

Dear Sir,

I have your letter of the 14th inst. regarding the proposed line from the station to the bridge. I have been looking into the matter and find that the proposed line is not feasible. I have therefore advised the Railway Co. to the effect that the proposed line is not feasible. I have also advised the Railway Co. to the effect that the proposed line is not feasible.

Yours faithfully,  
Minehan & Son

cc  
GEO. GARDNER & CO.  
see memo dated 2.10.10  
L.H. B.

## Atlantic City and Shore Railroad Company

OFFICE OF GENERAL SUPERINTENDENT

8 SOUTH VIRGINIA AVENUE

J. N. AKARMAN  
GENERAL SUPERINTENDENT

ATLANTIC CITY, N. J.

October 15th, 1910.

Federal Storage Battery Car Co.,

1779 Hudson Terminal, New York, N. Y.

Gentlemen:

We have had charge of the operation of the Edison-Beach Storage Battery Car during the Convention of the American Street & Interurban Railway Association here this week, and today between 1 and 5 P. M., in operating on South Carolina Avenue, between the Boardwalk and Atlantic Avenue, with this car we obtained the following data:

Number of trips,.....	36
Total Mileage,.....	14.4
Total Kilowatt Hours, current consumed,.....	5
Total number of Stops,.....	93
Average number of Passengers,.....	266
Average number of Stops per car mile,.....	18
Average consumption of current per car mile,.....	6 plus
Kilowatt Hours,.....	0.347
Average consumption of current per ton mile,.....	54.2
Watt Hours,.....	9
Average speed, including all intermediate and terminal stops, MPH,.....	9

Recording Instruments used: G.E. Type C Watt-meter, No. 37599,  
Weston Ammeter and Weston Voltmeter.

*William B. Phaley*  
*Albert B. Foster*

Conductor,  
Motorman.

The above statement is correct. The length of track between Boardwalk and Atlantic Ave. on So. Carolina Ave., is 4 1/10 miles.

*William S. Jackson*

Supervisor of  
Tracks and Lines.

I approve of the above statements as being correct, and assert furthermore that the car referred to was operated at all times while on our lines without the least difficulty; its acceleration and performance generally was perfect, and I wish to congratulate you on the production of such a splendid and adaptable car.

Yours very truly

*J. N. Akerman*  
General Superintendent.

[ATTACHMENT]

ESTIMATED CONSTRUCTION AND OPERATING COSTS  
BEACH BATTERY CAR SYSTEM COMPARED WITH TROLLEY SYSTEM.

Forty-First Annual Report  
of (1909) the  
BOARD OF RAILROAD COMMISSIONERS  
of the  
STATE OF MASSACHUSETTS, U. S. A.

Compiled from the returns of all electric railways in the State of Massachusetts, for 1909.

	Total Car Miles	117,493,499, all cars, 1 year
	Total Number of Passenger Cars	7,346, " " operated,
	Average Number of Car Miles per Car	15,870, per annum,
(1)	Average Number of Car Miles per Car	46.63 per day
	Total Passenger Carried	624,532,753, all cars, 1 year
	Total Main Track operated	2,764.7 miles
	Total Earnings, from Operation	\$ 31,956,006.18
	Gross Income, including Mail, Rents, Miscellaneous, etc	33,687,477.58
	Gross Liabilities	171,935,126.85
	Capital Stock	80,728,880.00
(2)	Assets, Construction	85,259,319.97
(3)	Assets, Equipment	29,746,083.86
	Assets, Land & Buildings	39,767,275.05
	Assets, Gross	177,745,987.90

OPERATING COSTS

OF ALL ROADS IN THE STATE OF MASSACHUSETTS (IF THEY HAD BEEN EQUIPPED WITH A  
DURING THE YEAR, 1909 (Trolley Roads) (FOR BEACH-BATTERY CARS & BATTERIES)

A C C O U N T	(GROSS EXPENSE, (GROSS EXPENS	(GROSS EXPENSE, (GROSS EXPENS	(GROSS EXPENSE, (GROSS EXPENS	
	(PER CAR MILE)	(PER CAR MILE)	(PER CAR MILE)	
Salaries, Officers & Clerks	\$ 691,791	\$ 0.00588	\$ 622,503	\$ 0.00527
Office Expense & Supplies	174,965	.00148	157,342	.00133
Legal Expense	421,784	.00359	421,784	.00359
Insurance	301,243	.00255	301,243	.00255
Other General Expense	433,610	.00371	435,610	.00371
Repair Roadbed & Track	1,999,495	.01702	999,748	.00851
Repair Overhead Lines	470,532	.00400		
Repair Buildings	314,397	.00268	235,798	.00201
Repair of Cars	1,694,504	.01102	647,262	.00551
Repair Elect. Car Equipment	1,053,359	.00897	526,679	.00449
Repair Miscellaneous Equipment	85,414	.00074	85,414	.00074
Provender and Stabling	44,008	.00037		
Cost of Elect. Motive Power	3,434,463	.02923	686,892	.00586
Wages of Employees	7,853,031	.06584	7,057,727	.06016
Removing Snow & Ice	114,528	.00097	114,528	.00097
Damages for Injuries	1,196,501	.01018	1,076,931	.00916
Tolls for Trackage Rights	125,005	.00107	125,005	.00107
Rents of Buildings, etc.	143,248	.00122	143,248	.00122
Other Transportation Expense	761,879	.00649	761,789	.00649
TOTAL OPERATING EXPENSE	\$20,915,718	\$0.17801	\$14,409,593	\$0.12264
Economy of Beach System				0.05537
5% Interest on \$115,000,000 Cost				\$1.10%
Cost of Constr. & Equip. Trolley Roads 5,750,000		\$0.04895		
Ditto. on \$80,500,000, Cost of				
Const. & Equip. if Beach System			\$ 4,025,000	\$0.03427
Estimated Depreciation at 5%	9,200,000	0.07831	5,440,000	0.05481
TOTAL FIXED CHARGES	\$35,865,718	\$0.30527	\$22,874,593	\$0.21172
Economy of Beach System			10,921,125	.09355

# [ATTACHMENT]

-2-

The Operating Costs itemized above for the Beach System are estimated, as nearly as possible in accordance with experience in regular operation of that system, for a long period of time, on the 28th and 29th Streets Crosstown R. R., New York City, with due allowance for the conditions of track, traffic and service generally as between the New York City conditions and the conditions of all roads, urban and interurban, in Massachusetts, and liberal allowances is also made, in the instance of the Beach Battery Car, for such possible depreciation maintenance, etc., of the Storage Batteries (Edison) as would by any contingency be required.

## BEACH SYSTEM - FIRST COST

By the use of Beach Battery Cars, equipped with Edison Batteries, on the electric railways included in the above, it would have been possible to eliminate all overhead construction, feeder distribution, high tension feeder distribution, substations, and other trolley accessories, such as tools, emergency wagons, etc., rail bonding and rail bonding accessories and equipment, and to have installed and equipped the roads at much lower expense, on account of Beach Battery Cars being lighter and using less power and also because Beach Battery Cars make it possible to get a power house factor of at least 90%, (as against not better than 50% with trolley cars), so that the first cost would have been at least 30% less than the \$115,000,000 (see items 1 and 3 above) of the above electric roads. Ordinarily the first cost would be as follows:-

COST OF CONSTRUCTION AND EQUIPMENT PER MILE (For a 20 Mile Road)			
TROLLEY SYSTEM	PER MILE OF ROAD	BEACH SYSTEM	
70 lb. Rail, 125 tons, @ \$35 per ton	\$ 4370	56 lb. (40 lb. would suffice) Rail 88 tons	\$ 3080
Joints & Plates.....	440	Joints & Plates.....	308
Ties, at 80¢.....	1500	Ties, at 50¢.....	1225
Track laying.....	600	Track Laying, (No Rail Bonding).....	500
Ballasting.....	1500	Ballasting.....	1800
Grading, Culverts, etc.....	1500	Grading, Culverts, etc.....	1200
Special Work at Curves, Sidings, etc.	500	Special Work at Curves, Sidings, etc.....	500
Line Construction, Feeder Dist.....	3000		
High Tension Feeder Dist. Rail Bond	1500		
1 Car per Mile, Average.....	3500	1 Car per Mile, Average.....	6500
Power Plant & Power Equipment, 1 mile	3000	Power Plant & Power Equipment, 1 mile....	1500
Car Barns, Substa. & Other Bldgs.....	1000	Car Barns.....	500
Substa. Equipment & Miscellaneous.		Switchboards, & Other small apparatus for	
Equipment incident to Trolley.....	1500	Charging Beach Battery Cars.....	500
Estimated Cost, Mile of Track.....	\$24000	Estimated Cost, Mile of Track.....	\$18513
Difference in Constr. & Equip. Cost in favor of Beach Battery Car System, less.....			7487
Percentage of Economy of Constr. & Equipment Cost, in favor of Beach Battery Car Syst.			31%

However, neither in the estimate of Construction & Equipment Cost, nor in the statement of Operating Expense, may the figures given be considered as applicable to every specific electric railway; they are only approximate and a faithful representation of comparative costs in the specific cases referred to herein.

In many instances the first cost with Beach System, would be much lower than herein specified, governed largely by conditions, as to whether the road is through rough country or through city streets, whether requiring paving or not, whether with many grades and fills or through level country, whether with many curves or long tangents, whether for fast and frequent service or slow and infrequent service, etc., etc.

In many instances, also, the operating expense with Beach System, would be much lower than herein specified, governed largely by conditions of track, traffic, schedules, speed,

[ATTACHMENT]

-3-

speed, stops per mile, grades, length of grades, etc., whether batteries might be given 10 to 30 minute intermediate charges or boosts occasionally during the day, and furthermore by the location of power plant, cost of fuel, etc., but the amounts given are as characteristic, in a general and approximate way only, as may be computed to cover the general situation.

With the Beach System, since there is no trolley requiring attention, it is quite practical and desirable in cities up to 40,000 or 50,000 population or where traffic is not dense, by installing a pay-as-you-enter arrangement with fare box (and change making machine if needed), to eliminate the conductor, allowing motorman to supervise fare collections. The conductor's wages amount to about 3½ cents per car mile, the elimination of which means a further reduction in the operating expenses. This is recommended in operation of Beach Cars under the traffic conditions referred to. It is not practical, however in trolley car or gasoline car operation, as the conductor is required to attend to the trolley in the former case and the motorman is required to give all of his time, sometime calling on the conductor for assistance, in the latter case.

FEDERAL STORAGE BATTERY CAR COMPANY,  
1779 Hudson Terminal, New York City.

Checked by:

---

Compiled by:

---

Approved:

---

[ATTACHMENT]

EDISON-BEACH STORAGE BATTERY CAR.

This car is of new design from the wheels to the roof inclusive.

For the same reason that fat and the weight thereof is of no service to the athlete, the Edison-Beach Storage Battery Car eliminates all unnecessary weight by the very best of materials and design and accomplishes the same result as far as longevity and practical utility is concerned, as the standard double truck trolley or under-ground contact car.

In the first place the car is light, yet fully as strong as if it weighed ten times as much, as far as practical demands are concerned.

2. The unnecessary consumption of power on cars obtaining with the solid axle car, is eliminated. Naturally when two wheels are joined together rigidly, on the same axle and the car is forced around a curve, the outside wheel travels a great deal further than the inside wheel. Therefore, the inside wheel must slip and grind against the inside rail with consequent enormous consumption of power and wear of wheel and rail. With the Edison-Beach Car each wheel is as independent as are the wheels of automobiles, turning independently on the same axle and each wheel is driven by its own motor.

The wheels are mounted on roller bearings, thereby eliminating bearing friction.

3. Silent chains are used to transmit the power

[ATTACHMENT]

- 2 -

from the motors to the wheels, with consequent quiet running and the absence of all gear noises as common on trolley cars.

4. The car seats 45 and will hold 100 persons. On each side there are two longitudinal seats, the same as obtains on the HoAdoo tunnel cars. Under the seats the Edison Storage Batteries are placed - 180 in all, and of the A-8 type. A separate set of batteries supplies current for the lights, and these are also located under the seats.

5. The car will travel 85 miles per charge on the basis of stopping ten times per mile, letting off and taking on passengers. If allowed to run without stops, it would probably run 125 miles.

The scheduled speed is 10 miles per hour, but the car has reached a speed of 35 miles per hour on a long, straight level track.

There are four motors, each of which is rated at 5 horse power, or 20 horse power in all.

The car weighs about 9 tons, and accelerates one mile per hour per second; that is, at the end of the first second after starting, she is travelling at one mile per hour, at the end of the second two miles per hour, at the end of the third three miles per hour etc. until fully accelerated.

The car consumes one-fifth the electricity per car mile that the ordinary trolley car consumes and can be operated on the spur lines of railroads at one-eighth the cost of operating a spur

[ATTACHMENT]

9.

line train consisting of locomotive and one or more cars.

There are but two men necessary; the motorman and the conductor, the latter acting as flagman when necessary.

The ventilators are of new design, placed in the roof of the car, and take out the bad air and replenish it with fresh air without subjecting the passengers to any draft. Hence the air in the car is always fresh.

The most improved type of vestibules are on each end of the body, and pay as you enter arrangement can be installed without difficulty.

The car is equipped with a Klaxon Warning Signal on each end, operated by the same batteries that run the motors. They were specially designed for this work, and can be heard as far ahead as the steam whistle of a locomotive. A button with removable plunger, placed accessible to the foot of the motorman operates the Klaxon. Mr. Edison and Mr. Beach selected the Klaxon for this work, because of the tremendous success it has met with for use on automobiles, and with which the automobiles of Mr. Edison and Mr. Beach have been equipped for some time.

In short, this car is the result of the development in automobiles. It utilizes the roller bearing in the wheels, is operated by Edison Storage Batteries which were primarily designed for operating automobiles, for which purpose thousands are being sold. It is also equipped with the Klaxon Warning Signal which is universally considered the best automobile warning signal in existence.

[ATTACHMENT]

- 4 -

So great have been the refinements in eliminating friction and weight, that whereas the battery equipment in this car will drive it for 85 miles, the same battery in a clumsy, unnecessarily heavy trolley car would not drive it ten miles. So it is not the battery nor car alone, but each is as great an invention as the other.

Battery, St.

1134

October 21, 1910.

Mr. R. H. Beach,  
Hudson Terminal Building,  
New York, N.Y.

My dear Mr. Beach:-

In accordance with my promise I brought up with Mr. Edison the other day the possibility of allowing you a discount on Edison batteries. Mr. Edison reminded me that under his arrangement with you he is giving you very substantial protection and has refused to supply batteries with other types of railway cars. In view of this fact, he does not feel that any concessions should be made in the way of discounts.

Regarding your question whether there would be any objection to our Legal Department doing your patent work, I also discussed this with Mr. Edison and we have agreed that this can be done and you will be charged for the work at the same rate that you would have to pay in New York. I think the work will be attended to quite satisfactorily.

Yours very truly,

F.L.D./ARK.

Vice-President.

Auto

John R. Roberts, President

C. L. Phillips, Vice Pres.

W. R. Roberts, Treasurer

Factory 1433 to 1437 De Kalb Street,  
Brooklyn, N.Y.

CABLE ADDRESS  
WROCO-NEW YORK  
CODES: WESTERN UNION  
A.B.C. SYSTEM

Office of *W. R. Ostrander & Co.*

Manufacturers of Spraying Cylinders  
and Electrical Supplies.

Electric Bells, Electric Annunciators,  
Speaking Tubes, Whistles,  
Bongos, Alarms, Telegraphs, Telephones, etc.  
Gas and Electric Lighting Supplies.

22 Day Street,  
New York.

Oct. 21, 1910.

Mr. Thos. A. Edison,  
Orange, N. J.

Dear Sir:-

We have been referred to you by the Federal Storage Battery Car Co. of 450 Church St. New York, who have been placing some orders with us, and being desirous of continuing to receive their patronage, we have asked them for the usual trade references. We would appreciate, in confidence, any information that you may be able to give us regarding their financial responsibility, and the manner in which they have been taking care of their account.

Yours very truly,

W. R. OSTRANDER & CO.

Very truly,

W. R. O.  
W. R. O.  
A. D.

*Don't know much about their financial standing, think they have capital sufficient for their business which appears safe*  
*They have paid my bill so far & I would trust them to pay the balance*  
*Edison*

*Ben Beach*

**EDISON STORAGE BATTERY CO.  
FEDERAL STORAGE BATTERY CAR CO.**

McCormick Building - 193 Michigan Avenue  
CHICAGO

William Walter Wheatly  
Lucien Wheatly

*Ans 10/29*

October 28, 1911

Telephone  
Edison 70

Mr. Thomas A. Edison,  
Orange, New Jersey.

My dear Mr. Edison:

I have received through Mr. Miller, your Secretary, the letter of introduction to Mr. Samuel Insull, President of the Commonwealth-Edison Company, for which kindly accept my thanks. I will try to connect with Mr. Insull during this present week, and see how his "litter of pigs" is getting along.

No doubt, Mr. Beach has already told you that I have completed an arrangement with the Chicago Railways Company, Mr. John M. Roach, President, to place on one of his lines, to be selected by his Chief Engineer, a single truck and a double truck car for demonstration purposes. Mr. Roach is deeply interested in the car and wanted to know if Mr. Edison really thought his battery would operate a street car. Mr. Roach has a place somewhere in Florida and says he has seen you there many times, and that you may remember him. Mr. Roach commenced as a telegrapher and says he has always very much admired your genius and persistency.

We feel that shortly after the demonstration has been successfully made in this city, we shall have no difficulty in

*Copy given of Oct 28 of hand  
I shall do everything possible  
in the way of promoting the  
high speed of your battery  
can undertake to assist  
W. W. Wheatly*

TAE -2-

selling a large number of these cars to the street railways in this territory. The principal inquiry for the cars is from the interurban roads, dozens of which are now in process of promotion, and financing, and all of them want an independent motor car of somewhat larger type than our present double truck car. The steam roads hereabouts have many short branch lines where they wish to operate an independent motor car with a compartment for baggage and express. The writer is of the opinion that your storage battery, with the improvements which you already have in view to lighten its weight, is going to revolutionize the transportation business; and that history will record this as your greatest achievement for the benefit of humanity.

In a general way, I may say that we are having a great many inquiries from different sources concerning your storage battery. It looks as if we were going to be able to do a good business here, and we are getting organized to take care of it. At this time, the principal inquiry is with regard to the B-4 lighting sets. Our first business of importance will be with these batteries, and we hope the factory will be able to fill our orders promptly. We have already placed orders with Mr. Bee for 27-sets B-4 batteries. We are going after the taxicab and automobile livery companies, with the view of having them adopt our lighting battery in place of the Prestolyte, and other systems

TAE -3-

of lighting.

We shall be greatly pleased to welcome you in Chicago,  
and would like to have you make our office your business home,  
while here.

Thanking you for your kindness and courtesy, which is  
much appreciated, we are,

Yours very truly,

WWW-L

A handwritten signature in cursive script, appearing to read "W.W. Went", followed by a large, sweeping checkmark or flourish.



1613

October 26, 1910.

Messrs. Minohan & Son,  
Townsville,  
Queensland, Australia.

Gentlemen:-

Replying to yours of the 15th ult.  
would say that we cannot appoint you the agents  
for the Edison Storage Battery, having previously  
appointed the N. B. Limited of Sydney, to intro-  
duce and exploit the battery in Australia. We  
have notified them of the privileges accorded you  
through your connection with the Federal Storage  
Battery Car Company. I would suggest that you  
get in touch with the N. B. Limited, and form some  
arrangement by which you can cooperate to mutual  
advantage.

Yours very truly,

CC/ARY.

Vice-President.

Telegrams: (2)  
RODRIUM LONDON  
Telephone: (2)  
15433 CENTRAL  
9343 CECILIA

14, 15 & 16, Cockspur St.,

London, S.W. Nov. 9th 1910.

Cabled: (2) (2)  
WESTERN UNION  
LIVERPOOL AND  
WESTINGHOUSE.

Thomas A. Edison, Esq.,

West Orange, N. J.

Dear Sir,

I have been following, as closely as possible, your experiments, or rather, developments, in the construction of self contained tram cars, having been associated with the designing and operation of traction vehicles of this description for several years, and taken out a number of patents, most of which have related to improvements in the gasolene-electric type of transmission. As I intend to return to the "States" in about two weeks, after a long rest made necessary by ill health, and being anxious, and now fit, to take up a good strenuous job, and as the above line of work is that in which I have had the most experience and am most interested, it occurs to me that, if it is the intention of your company to interest itself seriously in this branch of railway work my experience may be of considerable use to you. It was not so much my intention, however, in writing this letter, of submitting an application for a position, but it is written rather, with a view of finding out, if possible, whether it is your intention to engage in this class of work and, in that case, of its leading up to an interview with you on my return. I will refrain from going into my record and experience, therefore, excepting a few remarks which will serve as a partial identification, for I had the pleasure of being introduced to you about three years ago, and it is for that reason that I have written to personally instead of to your

Par - Ed - Ham

11/19/10

Says that Ralph B. ...  
has been to do with the cars  
he has formed a Co. it is apparently  
going to be a big business  
There is an enormous field open  
as the inventor is necessary  
for station & roadwork  
and others seem willing to  
sell equipment for 150%  
above cost at 150% per

Thomas A. Edison, Esq. 2.

General Manager, whom I have never met. You may recall the occasion when, together with Mr. Berrien, of the Firestone Tire Co., and Mr. Palmer, Secy. and Treas. of the New York Transportation, we were shown through the battery plant, and afterwards had a very pleasant conversation with you, when we discussed motor cab and omnibus operation at some length. At that time the writer was Engineer and Gen. Supt. of the N. Y. Transportation Co. and of several affiliated companies, including the 5th Ave. Coach Co., of which I was also a director. You may possibly have been told by Mr. Bee, at the time, of my being, to a considerable extent, instrumental in the establishment of the motor omnibus service on 5th Ave. where its introduction converted the old, almost moribund company into a profitable proposition. You may also have heard of the very successful performance of the ten gasolene-electric machines which have been running for three years on the service, and which were designed by myself and built under my supervision. While these do not embody my ideas of an ideal, or even an up to date system, they have conclusively demonstrated their superiority over the gear driven busses in durability, ease of handling, economy of maintenance, percentage of working days, acceleration etc, although the latter machines (of DeDion manufacture) are still the best examples of the gear driven type.

I fully recognize (what some engineers, apparently, do not) that the field for electric transmission (for self contained units) is in light railway work, where the circumstances of operation are such that ordinary electric installation (overhead or third rail) would not pay, and where steam trains are too heavy for the traffic

Thomas A. Edison, Esq.

3.

requirements. For example, I might mention the (so called) Rapid Transit on Staten Island, where I have seen two car trains with a crew of five men, and about as many passengers. There are numerous other localities which are now served, indifferently, by suburban trains, and where the traffic requirements would not justify electrification, but where light, high speed, self contained cars would be ideal on account of their economy of operation, low first cost, quicker service, more elastic response to traffic fluctuations, and the fact that they can be made to replace steam trains gradually and without any confusion. There are doubtless many railway companies which would be glad to try out one, or a number of self contained cars in an experimental way, were such cars available, whereas it would be out of the question for them to consider any experimental installation of overhead or third rail equipment. I am sure that all these considerations, and probably many others, have been studied by you, and I merely refer to them in order to indicate, roughly, what my ideas are of the future developments of this branch of engineering, and along which lines I am anxious to follow it. I should be very glad indeed to talk with you on the subject, and if this feeling is reciprocated, even in a lesser degree, I shall be pleased to run out to Orange soon after my return, and before I go out to Cleveland, where I shall have to go shortly. In that case, perhaps you may be good enough to drop me a line at the Engineers Club, New York. Hoping very much to have the pleasure of renewing our acquaintance, I remain

Respectfully yours, *P. S. Clark*

P. S. I recall one topic of my conversation with you, which prompts me to say that I am not a "slide rule" engineer.

*L. K. C.*

FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF  
BEACH CARS

EQUIPPED WITH  
EDISON STORAGE BATTERIES

1779 HUDSON TERMINAL  
50 CHURCH STREET  
PHONE 3558 CORTLANDT  
NEW YORK CITY

R. Thomas A. Edison,  
Edison Storage Battery Co.,  
ORANGE, N.J.

My dear Mr. Edison:

I enclose herewith copy of a letter which I have sent to Mr. J. Stuart, Vice-President of the Erie Railroad.

Kindly note that we are endeavoring to get up a party of officials to visit Orange on Saturday afternoon of this week. This party will include the following gentlemen:

Mr. F. D. Underwood, Pres't. of the Erie Railroad,  
" J. C. Stuart, V.P. " "  
" Ralph Peters, Pres't. of the Long Island Railroad, " "  
" F. E. Haff, Secy. " "  
" J. S. Ferguson, 40 Wall St., N.Y. City.

We hope to be successful in having all of these gentlemen go to Orange on Saturday afternoon, and it would give all of them great pleasure to meet you. Please try and make your arrangements to be with us about 2:30 P.M.

Yours very truly,

R/MB

*S*

*R.N. Beach*

*Beach*  
*I have to go up to*  
*Long Island to see*  
*galesek to see*  
*their big*  
*Greening plant*  
*we are with our*  
*calls at cant*  
*Conce*

COPY

New York, Nov. 16, 1910.

Mr. J. C. Stuart,  
Vice-President,  
Erie Railroad,  
NEW YORK CITY.

My dear Mr. Stuart:

Mr. Wheatly tells me that during his conversation with you this morning it was proposed that you and Mr. Underwood should visit the Forest Hills Branch on Saturday afternoon of this week and witness a test of our storage battery car. I am writing to confirm Mr. Wheatly's invitation to you and to Mr. Underwood, and also to say that we have asked Mr. Ralph Peters, President, and Mr. F. E. Haff, Secretary of the Long Island R.R. to witness the test on Saturday afternoon.

I am informing Mr. Edison of this arrangement, and hope that nothing will interfere with your plans. Either Mr. Wheatly or myself will call upon you Saturday morning to ascertain definitely concerning it.

Yours very truly

FEDERAL STORAGE BATTERY CAR COMPANY.

(Sgd) *RHB*

President.

ALL AGREEMENTS ARE CONTINGENT UPON STRIKES, ACCIDENTS, DELAYS OF CARRIERS, AND OTHER CAUSES BEYOND OUR CONTROL.

CABLE ADDRESS: "DIEHL-ELIZABETH" CODES USED: LIESER'S, A.B.C.-V. EDITION, A.1. AND PRIVATE.

BURNETT C. KENTON, President.  
PHILIP DIEHL, Vice President.  
HERBERT S. MILLER, Secretary.  
JOHN A. RED, Treasurer.

## Diehl Manufacturing Company

MANUFACTURERS OF

### ELECTRICAL APPARATUS

MAIN OFFICE AND FACTORY  
ELIZABETHPORT, NEW JERSEY

SHOW ROOMS:  
NEW YORK, 90 Prince St.  
BOSTON, 126-132 Essex Street.  
PHILADELPHIA, 103 Race St.  
CHICAGO, 207 N. Jackson Boulevard.



Elizabethport, N. J., Nov. 18, 1910.

Edison Storage Battery Car Co.  
New York City, N. Y.

Gentlemen:-

Ref. 11/22-N.Y.

We have been referred to you as to the  
financial standing of the Federal Storage Battery  
Car Company, New York City. Will you please let us  
know your experience with this Company and their  
financial standing and whether you consider them  
good for a credit of \$1600.00?

Any information you can give us we assure you  
will be very much appreciated and if at any time we  
can be of service to you we will be glad to reciprocate.  
This information will be treated confidentially.

Yours very truly,

DIEHL MANUFACTURING COMPANY

*W. S. Cameron*  
Asst. Treasurer.

WRC/EP  
Ac

*Ans 11/22/10*

*Say that the Co is formed by  
Ralph Beach who is in the  
many years Electric RR salesman  
for the E.C. - He is absolutely  
sure his relations with one  
brokers in coast street  
they are forming the  
money - B. & O.*

*proceeding  
Cameron 3 months for  
to be a letter to him  
of \$2500 for the  
to pay, I think he  
is ok for 3 months -  
What he has a place to  
is in 944 at 11th St  
is in 1000 on  
1000 on 1000 on*

**FEDERAL STORAGE BATTERY CAR COMPANY**

MANUFACTURERS OF  
**BEACH CARS**

EQUIPPED WITH  
**EDISON STORAGE BATTERIES**

1778 HUDSON TERMINAL  
52 CHURCH STREET  
PHONE 3355 CORTLANDT  
NEW YORK CITY

Nov. 22, 1918

Mr. Thomas A. Edison,  
Edison Storage Battery Co.,  
ORANGE, N.J.

My dear Mr. Edison:

Just a word, to let you know what we have accomplished, and what we have not accomplished in this double truck car. I feel that we have made a distinct advance in current economy per ton mile, but I am far from being satisfied with our weight. The weight of the car complete is in round numbers 30,000 lbs. The weight of the single truck car is 10,000 lbs. The seating capacity of the single truck car is 28, and the weight per passenger about 350 lbs. We have increased the weight in the double truck car 20,000 lbs. and gained seating capacity for only 14 people, or about 1700 lbs. per passenger for the increased seating capacity. This seems to me altogether wrong. Of course there are now problems involved in the construction of a double truck car. I think it is quite possible that we will never be able to get quite the weight per passenger in a double truck car as in a single truck car, but we certainly ought to be able to do a great deal better than we have done in this matter of dead weight, particularly in the body. The weights are distributed approximately as follows: Trucks and motors 11,000 lbs., batteries 8,000 lbs., body 14,000 lbs.

We can take about 2000 lbs. off the trucks, nearly all of this out of the wheels. I am satisfied that we can reduce it by changing the design of the body, at least 4000 lbs., maybe more. The reduction in the weight of the battery would be considerable, but I cannot say just how much, but should think at least 1500 lbs.

I have already begun work on the new design of the body, and will push it as rapidly as possible. The general design of the truck seems to be good. The only place to look for lighter weight is in the wheels. On the whole, I think we ought to feel pleased with results as far as we have gone, particularly of our very low current consumption, which is about 40 watts while maintaining an average of about 22 miles an hour. The car reaches a maximum of 30 miles an hour. On an upgrade of 2% its maximum speed is 16 miles an hour.

I enclose you herewith a detailed report of the test run made on Sunday last.

Yours truly,

B/HB  
ENC

*RAH Beach*

*Beach Better show me the plans of used 2 truck car before you build, think I can help some in lightening*

*Ans 11/31/18*

[ENCLOSURE]

Sunday, November 20, 1910.

Trip Car No. 101 from West Orange to Forest Hills, and from Forest Hills to Montclair Heights and return.

Total distance 16.8 Miles

Total power consumption 100 ampere hours.

Time	Voltage	Ampere hours	Stations	Ampere hours	Voltage	Time
11:06 A.M.		0	West Orange 4.1 Miles			
11:23 " "	110	20	Forest Hills .9 M.	10	122	3:09 P.M.
	110	30	Scho Park .6 M.	5	126	3:06 " "
	110	34	Orchard St. .6 M.			3:00 " "
	106	30	Bloomfield .4 M.	5	125	3:57 " "
	100	47	Glen Ridge 1 M.	5	125	3:55 " "
	98	62	Montclair 21.9 M.	5	125	2:52 " "
	98	76	Park Street .9 M.			
	95	36	Upper Montclair .6 M.	3-5/4	124	3:46 " "
11:47 A.M.	108	92	Mountain Avenue .4 M.	3	106	2:45 " "
11:49 " "	118	96	Montclair Heights	0	123	2:40 " "

Sunday, November 20, 1910.

Trip Car No. 101 from Forest Hills to crossover east of Hackensack River Bridge and return to Forest Hills, thence from Forest Hills to West Orange.

Total distance 15.6 Miles

Total power consumption 90 ampere hours.

Time	Voltage	Amp. hrs.	Stations	Amp. hrs.	Voltage	Time
<del>3:00 P.M.</del>	<del>110</del>	<del>100</del>	West Orange	100	115	4:05 P.M.
<del>3:00 P.M.</del>	<del>110</del>	<del>10</del>	Forest Hills	70	116	3:50 P.M.
3:09 P.M.	122	10	Forest Hills			3:45 " "
3:13 " "	123	10	Newark	80	90	3:41 " "
3:16 " "	120	15	West Arlington		85	3:38 " "
3:17 " "		18	Arlington		85	3:35 " "
3:25 " "	100	27-1/2	Crossover East Hackensack River	27-1/2	123	3:27 " "
			Distance Forest Hills to Crossover East Hackensack River, 4.8 Miles.			

Figuring average voltage at 95 and total ampere hours at 100 the watt hours are 18620 which for 29.8 miles gives 625 watt hours per car mile, or 43 watt hours per ton mile. Maximum speed 26 to 30 miles per hour down grade 2% -- speed on level track 18 to 23 miles per hour, speed going up 2% grade 14 to 16 miles per hour.



New York Dec 2 1910

Dear Mr. Edison:

Enclosed you find a fine picture of the Storage Battery Car, which Mr. Beach had made.

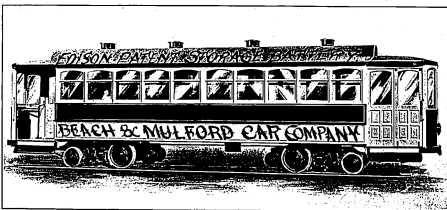
I was well acquainted with your old friend Mr. Mackenzie in his life time & he often talked of you. I have granted thirteen thousand five hundred (\$13,500) dollars with a through R. B. Beach in your Storage Battery Car Project. I know that it appears to have culminated in a successful way, I hope I will have a chance to reap the benefit that ought to

agree from the investment  
this money was used  
by Beach, I am informed  
by him in his early ex-  
periments with equipping  
Cape Ye.

I would appreciate  
a word from you relative  
to the success of your  
invention & if you think  
I have made a wise  
investment,

In the meantime,  
I am, yours truly,  
Charles M. Bedford  
199 Washington St  
New York

P. Mr Beach introduced  
me to you as the "Ice man"  
when we once visited  
your laboratory CM



[ATTACHMENT]

Battery  
Beach

Day. have not followed

Besoh's financial affairs

I ~~only~~ furnish batteries

I think Besoh if he  
manages right is bound  
to make a large & profitable

business, the demand  
will be very great,

5

Bat-  
Beach

FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF  
BEACH CARS

EQUIPPED WITH  
EDISON STORAGE BATTERIES

1778 HUDSON TERMINAL  
50 CHURCH STREET  
PHONE 3386 CORTLANDT  
NEW YORK CITY

Dec. 12, 1910.

Mr. Thomas A. Edison,  
Edison Storage Battery Co.,  
ORANGE, N.J.

My dear Mr. Edison:

Enclosed please find a letter from Mr. Langdon which explains itself. I am at work on the bus and will get it just as rapidly as possible. That I am doing is getting a very light body made, and am working for Langdon's design to see if it is not possible to improve it. I would rather that you would not let Langdon know that I am doing this, as I do not want to make him feel that I am butting in on his design. I may never be able to improve it, but there is no harm trying.

Yours truly,

B/MB  
BNC

Bat Beach

*Bat Beach*  
*Rec'd from Edison*  
*I think the Sheriff was paid for*  
*be after him. He never paid for*  
*Car but gives notes & not even*  
*just fallen due just as I thought.*  
*Rec'd from Edison*  
*Rec'd from Edison*

[ENCLOSURE]

**EDISON STORAGE BATTERY CO.  
FEDERAL STORAGE BATTERY CAR CO.**

McCormick Building - 193 Michigan Avenue  
**CHICAGO**

William Walter Whealty  
Lucien Whealty

Telephone  
Harrison 70

December 7, 1910.  
209/General.

Mr. R. H. Beach,  
New York City.

Dear Mr. Beach:

Several days ago, Mr. F. W. Harvey, Western Sales Agent of the Electric Omnibus & Truck Company, of which Mr. C. J. Field is president and general manager, called at this office and left with us a lot of literature.

Mr. Harvey informed us that he had taken an order from one of the large business houses in this city for ten omnibuses equipped with Edison Storage Batteries. When I asked him what firm it was that he had sold them to, he replied that the name of the firm was at present a secret and could not be divulged. He informed me that Mr. Field was now building the ten omnibuses in his Company's works at Passaic, New Jersey, and that Mr. Field's New York office was at 135 Broadway.

Mr. Harvey stated that Mr. Field has made great improvement in the omnibus since he made the first one, which is now standing in the yard at Orange, New Jersey, of the Storage Battery Works.

Mr. Harvey appears to be pretty active in and around Chicago, and is telling everybody around here that his Company is the only one which can offer electric omnibuses equipped with Edison Storage Batteries. All of the success which he appears

[ENCLOSURE]

RHB -2-

to be having in getting people interested is due to his statement that his busses are equipped with Edison Storage Batteries.

I am sending you all of this information because of what you told me when I was in New York concerning the attitude of Mr. Edison towards this business. You may, if you desire, show this letter to him.

Yours very truly,

WWW-L

A handwritten signature in dark ink, appearing to read "W.W. Went", with a stylized flourish extending from the end of the name.

Battery, St.,

**FEDERAL STORAGE BATTERY CAR COMPANY**

MANUFACTURERS OF  
BEACH CARS

EQUIPPED WITH  
**EDISON STORAGE BATTERIES**

1778 HUDSON TERMINAL  
20 CHURCH STREET  
PHONE 3326 CORTLANDT  
NEW YORK CITY

Dec. 25, 1910

1134

Mr. Frank L. Dyer,  
Vice Pres. & Genl. Counsel,  
Edison Storage Battery Co.,  
ORANGE, N.J.

My dear Dyer:

Enclosed you will please find a letter addressed to us by the Ignatius Gross Co. I believe these people are a large exporting house. The man who signed this letter seems to be a very clear-headed person. He has been here and offered to buy a car at once and ship it to Mexico and use it for demonstration purposes provided we will give him the agency for that country.

He would also like to have the agency for the battery and the Larned truck and carriage. I think they have money and are disposed to spend some of it in this direction.

He also wants the agency for Cuba, Puerto Rico and Italy.

I am referring the matter to you for your decision in regard to the batteries. Kindly let him know, and please return the letter to us.

Yours truly,

FEDERAL STORAGE BATTERY CAR COMPANY.

*R. H. Beach*  
President.

B/EB  
ENC

*E. J. [unclear]*

Battery, St.

1134

Dec. 22, 1910.

Mr. R. H. Beach,  
Hudson Terminal Building,  
New York City.

Dear Mr. Beach:

Yours of the 15th inst. was duly received, enclosing letter from the Ignatius Gross Co., and upon referring the matter to Mr. Edison he states that he does not want to tie up with anybody at present as he is not ready to do so. I suggest, therefore, that the entire matter be deferred until later.

In accordance with your request, I return the letter from these people herewith.

Yours very truly,

FLD/IWW  
Enc-

Vice-President.

*Battery, St.*

FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF  
BEACH CARS

EQUIPPED WITH  
EDISON STORAGE BATTERIES

1775 HUDSON TERMINAL  
20 CHURCH STREET  
PHONE 3256 CORTLANDT  
NEW YORK CITY

Dec. 25, 1910.

*1124*

Mr. Frank L. Dyer,  
V-P. & Genl. Counsel,  
Edison Storage Battery Co.,  
ORANGE, N.J.

*W. L. Dyer*

Dear Mr. Dyer:

In regard to the Ignatius Gross Co., I have notified Mr. Gross of your decision, but inasmuch as he seems anxious to sell cars, and as we need the business very badly, I have told him that we would for one year give him the agency in Mexico for the cars provided he buys a demonstration car at once, which he has promised to do.

In regard to C. Tennant & Sons Co., I will do nothing at present on it, though think we ought to get together on this agency problem, which is a very troublesome one. I feel for the whole United States we ought not to have any agencies. A great many people come here and want an agency. I did give Wheatly the agency in Chicago for a year, but am now sorry that I did it, it really amounts to nothing.

Any one who wants to buy these cars in this country must come here, or at least we must get personally in touch with them. The car is so highly technical that it is practically impossible for an agent to properly talk it or present it because of the want of technical knowledge. It all looks easy, but as a matter of fact it is very difficult. About the only function an agent performs is to sit in some office in some remote city and talk about these cars and say things that he does not understand, and the winding up of every case so far has been that we have to go and see the people ourselves,

12/25/16 -- FLD -- 2

which we might just as well do in the first place. Again they all want an excessively high commission -- everybody wants 10%. Now, you will remember that we pay the Battery Company the list price for the battery, and when we sell a car we have to pay a commission on the list price, which has to be charged against the small profit which we can make on the car itself. When we add this commission on the battery and the other items which enter into the cost of the car, it makes our price excessive, so in view of the whole situation I feel that we ought not to have any agents in the United States.

We have now succeeded in getting three important friends to work for us without any pay. The Pay-as-you-enter Car Company through their agents throughout this country are advising their customers to use these cars. The Brill Car Company, strange to say, are also advising their customers, and the General Electric Co. to quite an extent are advising the use of these cars. This being true, and it is true, it seems to me that it is better for us to sit tight just as we are.

I will drop over in a few days and have a talk with you.

Yours truly,

FEDERAL STORAGE BATTERY CAR COMPANY.

*R. H. Beach*  
President.

B/HE

THOMAS A. EDISON  
President

FRANK L. DYER  
Vice-President and General Counsel

E. G. DODGE  
General Manager

H. F. MULLER  
Secretary-Treasurer

Battery, St.,  
**EDISON STORAGE BATTERY CO.**

Telephone, post Orange

ORANGE, NEW JERSEY Dec. 27, 1910.

1134  
R. H. Beach, Esq.,  
Hudson Terminal Building,  
New York City.

Dear Mr. Beach:

I hand you herewith a memorandum from Mr. Philips  
accompanying commercial reports on Ignatius Cross, concerning whom  
you wrote me a few days ago. Please return these reports to me  
when you have read them.

Yours very truly,

Returned to Philips  
Philip  
Frank L. Dyer  
Vice-President.

FLD/IWW

Enc-

Mr Beach - What  
of Ed. B. rights. it  
appears Mexico agency  
is taken - who is the  
agent - do you know?  
12/29

Noted  
Brook

**FEDERAL STORAGE BATTERY CAR COMPANY**

MANUFACTURERS OF  
**BEACH CARS**

EQUIPPED WITH  
**EDISON STORAGE BATTERIES**

1779 HUDSON TERMINAL  
80 CHURCH STREET  
PHONE 2354 CORTLANDT  
NEW YORK CITY

Am 1/3/11  
Mr. Thomas A. Edison,  
ORANGE, N.J.

My dear Mr. Edison:

I do not want to burden you with a long letter, but I feel  
though I ought to make you a very brief report of what we have ac-  
complished during the past year, and from this we can make a guess  
as to what we may be able to accomplish in the coming year.

First 25th & 26th Street: We put the car in service on the 2nd  
of March, and up to a week ago Sunday it was in constant operation.  
The car has given a good account of itself; aside from worn brake  
shoes and a slight difficulty of the brake rigging it has operated I  
think perfectly. Its watt consumption has run about 300 watt hours  
per car mile at the motor brushes.

In October we got out the second car of this type and size and  
reduced the watt consumption to 347 watt hours per car mile. This  
was accomplished by a better motor and better alignment of motor and  
gear and very much better brake rigging. I can see no opportunity  
to improve this single truck car, except I think the bearings should  
be in the wheels instead of as now constructed; there are two advantages  
in this, one it is cheaper, the other it enables us to reduce the  
weight of the axle by using forced I-beam sections instead of the  
round axles; it also eliminates the joint in the center of the  
axle. We have had no trouble from the use of the joint, but most

*Best agent to sell these cars  
is Beach. If you have a good  
factory, power & arrangements  
my advice is that you  
have no agents, but  
work the sales  
yourself.*

*Edison*

12/30/10 -- TAE -- 2

people object to it on the ground that it is one more moving thing. We may be able to lighten the car body a little, but at the moment I do not see any place where we can reduce it very much. On the whole, I think the single truck car is developed now so that it is really commercial.

You have perhaps observed in the papers some commotion about the use of Gould's batteries on 28th & 29th streets. The truth in regard to this is; the Receiver of the 28th & 29th street line has made temporary arrangements with the Receiver of the Third Avenue line, under which arrangement the Third Avenue R.R. supplies all equipment and operates the road. The object in making this arrangement on the part of the Receiver of the 28th & 29th street line is to find out whether or not the traffic on this line was sufficiently large to warrant them in equipping it. The object on the part of the Third Avenue Receiver was to find out the same thing in order to warrant him in purchasing the road. No question as to the relative merits of our car versus the Gould car enters into the problem.

You know as well as I do, that when it comes to this matter of selling cars any permanently successful business must rest upon the success of the car as a money earning thing; the pride and jealousy of men may for a time prevent the use of any particular device, but if the device is really meritorious, then it will be used. I am very certain our device possesses merit, therefore it must come into use.

The principal advantage that I can see to us in this matter of placing any battery cars on the 28th & 29th street line is that it has aroused wide-spread interest in the use of storage battery cars, to such an extent it is true that the Chairman of the Bond Holders Committee of the Metropolitan Street Railway Company, Mr. Guy Tripp, who I

12/30/10 -- TAE -- 3

have repeatedly urged to investigate our car, and who has always dismissed the subject as unworthy of serious consideration until this week, when he said to me " If the Third Avenue Road can seriously consider using a lead battery car then your car must be worthy of serious consideration." I think we can look for some orders from this road during the coming year. As to the Third Avenue Road, and its subsidiaries, I do not believe we can hope for any business from them as long as Mr. Whitridge is in control of the road.

As to the Double truck car; I think we have clearly demonstrated the adaptability of this double truck car for ordinary slow speed interurban service, and by a modification in its structure so as to reduce the weight, which I now know I can do, can bring the total weight with the present battery capacity from 30,000 to 24,000 pounds, and at the same time increase the strength of the truck. I will not be able to increase the strength of the body. I think it is safe to say that we have a much greater strength in the body than we require. By this change the car will be suitable for street service work. As now made it is not suitable because the weight is too heavy to permit the A/8 battery to carry it on the grades; also the price is too high. We can hardly expect street railway men to pay the heavy cost of this car with a seating capacity for 40 people when they can buy for one-half the price a car which will have a seating capacity for 30 people. We have the design very nearly completed for the modified form of this double truck car, which will permit its use on ordinary interurban tracks. On spur line steam railroad service such as the Orange branch of the Erie, the car is very satisfactory as it is; I mean of course, <sup>with</sup> the obvious modifications which we already have under way.

12/30/10 -- TMR -- 4

The outlook for the coming year for the sale of a few of these cars to steam railroads is very encouraging. It is impossible to tell the number that we can sell, but I think to say that we can sell 25 or 30 of these cars is not an extravagant statement. I should say it would be a fair guess <sup>to say</sup> that we should be able during <sup>coming</sup> the year to sell all told from 50 to 100 cars of both kinds.

In regard to the general attitude of people towards the storage battery car, I am very certain that it has improved very much. The press throughout the country have given us splendid notices, and the technical press which six months ago were highly critical of our work, as were also the engineers generally, today commend us, and I think I can safely say compliment us on the results that we have obtained.

There is a distinct tendency now on the part of car builders throughout the country to follow the pace which we have set in light car construction. You probably have had no time to bother with the technical press, but if you do you would see that every car builder in this country is now advocating light cars with arched roof, which of course is a copy of what we have done.

In the patent work on these cars your legal department are pushing it along as rapidly as possible, and there is very little to say on that.

There is one very difficult problem in connection with the development of this business which I have not solved, and I really do not know how to solve it, and that is the question of agents. Naturally, we want to be represented in different places. We tried with Mr. Wheatly to make a mutually satisfactory arrangement. Wheatly was an old railroad man, had a good acquaintance, and seemed anxious to take up this work in Chicago. He told me that he was provided with

12/30/10 -- TAE -- 5

capital to handle it and that he would open a proper office in Chicago and conduct the business in a businesslike way. I find, however that he has not done it. He has not the technical knowledge necessary to argue the merits of this kind of traction work. It looks very easy to the average engineer to go out and convince a railroad man of the merits of the storage battery, but in point of fact it is a very difficult thing I think, and most railway men would like to have a storage battery car, but when it comes to actually giving up the money and buying them, they all seem to feel that they want to try it on the dog first. Wheatly wanted an immense territory; I reluctantly gave it to him. No sooner did he have it than he began <sup>try to</sup> persuade us to let a factory in Chicago manufacture these cars. I believe that it is practically impossible for any factory to manufacture these cars. It would be just about the same thing as to let the Chloride Accumulator Company in Philadelphia make your batteries. The business is peculiar, great care must be taken to see that every little thing in regard to the car is exactly right. As evidence of this fact Mullaney copied our design and uses a chain; he has now decided to abandon the use of chains because he constantly breaks them. We have never broken a chain in over 20,000 miles on the 26th & 29th street line under very bad conditions. The reason is easy -- the alignment of our motors is correct. Mullaney has done poor work and has not preserved the alignment of his gears and pinions, and the result has been that the chain breaks very easily. These silent chains are peculiar, somewhat like a pack of cards, if the whole pack is held together tightly it requires enormous power to tear them, but if they are slipped a little so that only one card at a time is offered for resistance then the whole pack tears easily; that is about the way it is with the chain. I speak of this to show you how necessary it is that the car in its entirety must be made by some one who really knows how to do it, particularly in the beginning.

12/30/10 -- TAE -- 6

Another difficulty with this agency business is that they all want too much money. This car business is an expensive business. Buicks who are the largest car builders in the world pay 1% to 2-1/2% commission. Our agents all demand 10% not only upon the car but upon the battery. Wheatly feels very badly hurt because we do not pay him a commission of 10% on the battery in the car. Should we do this it would be equivalent to our paying \$700 commission for selling the car body and its equipment -- manifestly impossible. So, on the whole, I think we would be really better off without any agents, and while I would not want to say that this should be our definite policy I feel very much inclined to the plan for the coming year, outside perhaps of some foreign countries, to get out of this agency business and deal direct with the railroads. On the other hand, I cannot see that we have accomplished so much in a commercial way, and people are very slow to buy these cars, but I really feel that we have now gotten our plan under way and know what we want to make, that we will as time goes on meet with a very great success.

I would be very glad to be able to report to you that I had sold 1000 cars, but I have not, but I am going to keep right on trying just the same.

Yours truly,

*R. B. Bruck*

B/HE

**1910. Battery - Storage - Foreign - General (D-10-07)**

This folder contains correspondence and other documents relating to the patenting, manufacture, and sale of Edison storage batteries in countries other than the United States and Germany. Some of the letters refer to the marketing of storage batteries and the promotion of the streetcar business in Japan. There is also a reference to the battery business of Edison's former secretary, Alfred O. Tate, in Toronto, Canada. Among the correspondents are Herman E. Dick, John T. Morrow, H. F. Parshall, J. P. Morgan & Co. of New York, and Morgan, Grenfell & Co. of London. Also included is correspondence with W. R. Grace & Co. and Agar, Cross & Co. regarding sales rights for South America.

Approximately 60 percent of the documents have been selected. The items not selected consist primarily of inquiries about the nature and availability of batteries and documents that duplicate information in selected material.

Send new Glorapetally  
Catalogues - the nice kind to

Herman Harjes

Care Morgan Harjes & Co

Paris -

also to S. Bergmann

~~Paris~~

Berlin

Parshall,

London

Edm

Jan. 19-10

## Adresses

Herman<sup>H</sup> Harjes -

31, Boulevard Haussmann,  
Paris, France

H. F. Parshall -

Salisbury House

London Wall,

London - E.C. England

Sigmund Bergmann

23 Oudenarden Str.

Berlin, h. Germany

DANGER -  
TAPE

Dist Stor Ed's house

Jan. 31-1910

GP Morgan jr -

I send by bearer all the necessary  
data for the Engineers to make  
their report on

Yours Truly

Jan. 31-1910

Curve 6A. Shows the loss of capacity under a severe method of testing in the laboratory to get quick results, between the old E Battery and the new A battery = The old batteries were <sup>now</sup> ~~over~~ used in several hundred delivery wagons, and had to <sup>have</sup> ~~change~~ the nickel plate changed after their capacity had diminished to 70% of the original. This would represent about 1.25 complete charges & discharges on the accelerating test on Curve sheet 6A, but in actual practice the cells lasted very much longer.

The following is taken from the Records of the best known firms which are using

## The old E Cells -

	Vehicles	Upkeep per year	Total charges
Adams Express	155	\$68.7	657
Aitkin & Co	13	32	1020
Vandine			
Tiffany & Co	21	48	1113
Horn & Co	14	30	663
Macy & Co	15	36	639

The variation in life & costs are due to more or less care in attending the battery and also to the amount of work these vehicles are 1 or 2 ton delivery wagons.

It will be seen that in actual work the life of the ~~best~~ old E Battery is over 5 times that shown on the Curve 6A. There is no reason why the new Battery should not

give 5 times the life shown on the same sheet as all the ~~known~~ defects which were in the old battery are removed.

It will be seen ~~to~~ by the curves that the battery has had 415 complete charges & discharges and is still 7 per cent higher than when it started.

The new battery is sold for double the price that the lead battery is sold for, ~~and~~ this does not in the least affect our sales as the radius of action of the lead battery is too small to meet the requirements of actual practice and in addition, the extra weight of the battery requires a more powerful

wagon which is costly — The lowest price for the chassis of a one ton delivery wagon is \$1400, — which figures out that for every pound of freight pulled 70 cents must be invested in chassis, hence if 600 pounds of lead battery over and above the weight of an Edison battery was to be carried, it must be done at an expense of \$420, for chassis. Either that or the weight of freight carried must be reduced from 2000 lbs to 1400 lbs. In addition to this <sup>extra</sup> cost to the lead battery making its initial cost equal to the ~~lead~~ battery. This dead weight <sup>expense</sup>

of vehicle & battery has to  
be pulled around at an expense  
again there is the wear of  
Rubber tires —

~~Independent of the above~~

Independent of the above  
the lead battery ~~would have~~  
operated over a number of  
years in a vehicle would have  
to be sold for less than half  
of its present actual cost  
on account of the great number  
of renewals necessary

The figures given regarding costs  
and life were obtained from  
the firms mentioned and I am  
sure you ~~would~~ they will  
verify the same if called upon  
to do so

Battery - Canada.

# MIDLAND CONSTRUCTION COMPANY

CHAMBER OF COMMERCE  
CHICAGO

Chicago, February 7, 1910.

Ans 2/14/10  
Thomas A. Edison,  
Port Meyers, Fla.

Dear Mr. Edison:-

*Dick -*  
*The market in Canada would*  
*not warrant the starting of a*  
*factory for batteries*  
*2*  
On my way back to Chicago I stopped at Toronto where I had an appointment with an officer of the Provincial Government. While there I accidentally met A. O. Tate, whom I had not seen for years; he seemed very glad to see me and insisted on my looking through his storage battery plant, which he is just establishing, and gave me a report on the battery, and as it is quite recent I enclose same herewith for you may not have seen it. He seems quite enthusiastic over his prospects and I believe contemplates leaving within a week or ten days for a trip abroad to exploit his battery.

Since I have been in Canada the question has presented itself as to whether you would care to establish a factory there. I presume you know that Canada is making wonderful strides, is very prosperous, growing very rapidly and business is increasing by leaps and bounds. I have spent quite considerable time in Canada and have been greatly impressed with the future possibilities of that country. As I am very well connected there with splendid people, it occurred to me that perhaps your business might be increased tenfold if you were making your goods in Canada instead of importing them, and I could find the necessary capital to establish as large a business as you desire. I believe that a large and profitable business can be done with the battery as well as with anything else you wanted to manufacture in connection with it.

If this suggestion in general is favorably received, I would be glad to go into the matter fully with you.

Trusting that you are enjoying the pleasant weather in the South, and with my best wishes, I am,

Sincerely yours,

*H. C. Lico*

*part - Eng*  
*H. F. Parrish, M. B. Marshall*  
Consulting Engineer

TELEGRAMS: "PARSHALLE, LONDON."  
TELEPHONE: LONDON WALL 301.

Howan quote C

*Ans 3/4/10*

Salisbury House,  
London Wall,  
London, E.C.

February 14th 1910.

THOMAS A. EDISON, Esq.,  
Orange,  
New Jersey, U.S.A.

*Day Morrow can  
have all the data he*

My dear Sir,

~~TO 25 511~~  
~~EDISON BATTERY~~  
*Edison*

I have duly received the handsome brochure showing the progress you have been making in the development of your storage battery. I was proposing to send this brochure to Sir Ernest Cassel, who is just now in Egypt. To-day I met Mr. Grenfell of Morgan, Grenfell & Co. who brought to my attention certain information that you had furnished Messrs. J. P. Morgan relating particularly to the amount of money required for manufacturing the cells here in England. Mr. Grenfell suggested that I make a study of the matter with a view to assisting him in reaching a decision. On account of various engagements I shall be unable to leave England for some months to come. Mr. Grenfell is leaving England shortly for America and I judge, from what he has said, would like to have some information ready for him on his return. I have an old

Thomas A. Edison, Esq.

- 2 -

Feb. 14th 1910.

friend in America who has given a good deal of his time to electro-chemical processes. If it were agreeable to you I think I could arrange for him to visit you and get certain additional particulars as to the cost of producing and maintaining the battery and its commercial life. The man I am thinking of is Mr. J. T. Morrow, who was for years associated with the Boston Montana Mining Company and more recently has been advising E. S. Pearson in connection with certain electrical processes. He is absolutely trustworthy, rather enthusiastic as regards the newer applications of electricity and a very agreeable man to meet. Subject to your approval I would ask him to call upon you.

Trusting this will find you very well and with kind regards,

I remain,

Sincerely yours,

A handwritten signature in dark ink, appearing to read "W. Marshall". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

823  
*Agar, Cross & Company Limited*  
*London.*  
*Beaconsfield Street, New York*

*Battery St.*  
*Telegraphic Address*  
*"Agarcross," New York, "United States."*  
*901-903 Broadway, New York*

*New York, March 26th, 1910.*

Edison Storage Battery Co.,

Orange, N. J.

Dear Sirs:

We beg to acknowledge receipt of your letter of March 24th.

The writer will be only too glad to see your Mr. Dyer on Tuesday afternoon, and will call at #10 - Fifth Avenue about 2 P.M. If this is not satisfactory to Mr. Dyer, kindly have him telephone us, and we will make the hour whatever is suitable to him.

Yours very truly,

PPA AGAR, CROSS & CO., LTD.

G/R.

*Frank A. Chandler*

By \_\_\_\_\_  
MAH 26 1910  
\_\_\_\_\_  
\_\_\_\_\_

*Noted*

*Agar, Cross & Company Limited*  
London  
Buenos Aires, New York

*Telegraphic Address*  
*"Agarcross, New York," United States Bank*  
901-903 Broadway, New York  
11 Broadway

*New York*, April 1st, 1910.

APR 2 1910  
Edison Storage Battery Co.,  
Orange, N. J.

Dear Sirs:

In reference to the conversation which the writer had with your Mr. Dyer, we beg to put before you our ideas in regard to representing your Company, as well as the Lunsden Vehicle Company, in the Argentine Republic, also Paraguay and Uruguay, in South America.

As already explained to your Mr. Dyer, we have a very large organization and could very well take care of your line of storage batteries and vehicles in the countries above named.

We would at all times be willing to carry a consistent stock, as far as possible, and would be willing to pay cash for our original orders. However, on future orders we would have to expect your Company to help us in carrying the goods for stock, either by extended terms, or by additional discounts for cash payment.

We would put forth all our efforts to introduce the batteries into our territory, and would expect to have full protection and the sole agency from you, as long as we satisfactorily looked after our territory, and would do all in our power to have the business "go".

In case this matter was decided on promptly, we would agree to make a showing of a few of these batteries at the Exhibition, which is to open in Buenos Aires on the 25th of May.

We would also expect you to put our Buenos Aires house in possession of printed matter and complete data covering the efficiency, life, etc., of these batteries, to enable them to represent the goods in their proper light and proper value; also, to enable them to figure on any outfit or combination of outfits for which a demand might arise from time to time. We would also expect you to furnish us with such electrotypes which you have in your possession, to enable us to get up our own Spanish catalogs and pamphlets.

The writer understands that you will have to put this matter

-2-

Edison Storage Battery Co.,  
Orango, N.J.

April 1st, 1910.

up to Mr. Edison for final decision, and we hope we can look forward to a prompt and favorable reply, as we would like to start in to do pioneer work on these batteries at the beginning of the Exhibition.

Yours very truly,

G/R.

PPA. AGAR, CROSS & CO., LTD.

*Frank R. Cross*

- 1 -

John T. Morrow,  
25, Broad Street,  
New York City  
Cable Address: Morrow-Sarkos.

Say, I will write Parashall & see  
~~the~~ what can be done, your  
experience should make you just  
the man to start the English  
factory - <sup>MAY 1910</sup> ~~should~~ I do it -

Mr. Thomas A. Edison,  
Orange,  
New Jersey.

My dear Mr. Edison:-

Although I started in with the Edison Company  
at No. 65 Fifth Avenue, New York City, in the year 1889, Twenty-one  
years ago, I had never had the pleasure of meeting you until yesterday.

I was associated with the Edison Company in New York and Boston  
and afterwards with the General Electric Company at Lynn, for many years

I was Mr. Parashall's first assistant in the Designing Department  
of the General Electric Company and from there went to Montana to take  
charge of the Electrolytic refining of copper for the Boston and  
Montana Copper Company. I remained there ten years and eventually  
became General Superintendent of all of the operations pertaining  
to the dressing and reduction of ores and the refining of the copper.  
My work during the last five years with the Boston and Montana Company  
was largely executive and especially devoted to the reduction of  
costs, in which I was very successful.

In 1903 I took the position of General Manager of the Greene  
Consolidated Copper Company in Mexico, and afterwards went to Paris  
and London to supervise business operations for friends of mine in  
New York. I then came back to this City and took up the business

Copy of  
letter sent to  
Parashall May 10 1910  
E

Mr. Thomas A. Edison

- 2 -

and engineering affairs of various organizations in a consulting capacity.

During the past two years I have been carrying on certain investigations for Dr. F. S. Pearson, President of the Mexico Tramways Company and the Mexican Light and Power Company, with relation to the establishment of certain power consuming industries in or near the City of Mexico.

The Company has a large power surplus and their idea was to establish certain industries, which while absorbing comparatively large amounts of power at a good profit to the Power Company, could at the same time be operated so as to make a good profit on the business itself. For this purpose I made a careful study of such industries as,

Manufacture of Steel by Electricity,  
Manufacture of Caustic Soda and Bleach,  
Manufacture of Cyanide and Lime-Nitrogen,  
Manufacture of Calcium Carbide.

In this connection I have devoted a great deal of time to the study of the business and trade conditions pertaining to these different industries, and have given especial attention to the consideration of such points as,

What is the demand for the article to be manufactured?  
Will this demand increase or decrease?  
What are the other products with which it must compete?  
Cost to produce other competitive articles?  
Cost to produce article under consideration?  
How low can new product be sold at a profit?  
Result of cutting of prices by competitors?

Mr. Thomas A. Edison,

- 3 -

A careful examination of such points as these is necessary in considering any new business or manufacturing enterprise, and in making my study of the Edison Battery, I submitted it to the foregoing tests with the very encouraging results indicated in my report.

You will see that my work of late years has been more of a business than engineering nature, though combining both, and I felt quite at home in making the investigation, which Mr. Parahall requested. In doing this, I endeavored to obtain all possible evidence, both for and against, which would in any way have any bearing upon the matter, but the net result was overwhelmingly in favor of the superiority of the Edison Storage Battery over all others, and its splendid financial value as a manufacturing industry.

I took the liberty of suggesting to you yesterday the matter of opening a store somewhere in the Automobile District on Broadway, for the purpose of showing and demonstrating the Battery. I believe that this will prove to be the best kind of advertising. A place about 24 to 30 feet wide with about 50 to 60 feet depth will be all that is necessary. This would allow room for an office and a couple of demonstrating cars.

I have just finished my engagement with Dr. Pearson and am now at liberty to take up new work and would be very glad to be associated with you in some capacity in connection with your Storage Battery, either here or abroad.

If it is decided to manufacture your Batteries abroad for European consumption, I would like to undertake the matter for you,

Mr. Thomas A. Edison,

- 4 -

including the installing and operation of the factory and the sale of the Batteries and Battery Cars.

If this should prove agreeable to you, it seems to me, that it would be advisable for me to take up the work at once, in order to get all possible experience in connection with the whole enterprise, so that when it is decided to go ahead with the factory and business abroad, I will have had considerable experience both in the factory and sales departments.

If you care to keep the copy of the report which I made for Mr. Parshall, please do so, as I have duplicates of everything in my file.

I would like to hear from you at your convenience in reply to this letter and will call on you at any time suiting your convenience.

Yours ~~very~~ sincerely,

A handwritten signature in dark ink, appearing to read "John T. Morrow". The signature is fluid and cursive, with a long horizontal line extending from the end of the name.

JTM/D.

REFER TO THIS NUMBER  
IN YOUR REPLY

1501

MEMORANDUM

FRANK L. DYER,  
ORANGE, N. J.

Mr. Phillips

5/6/10.

Let me have as soon as possible a commercial report on  
Agar, Cross & Co., Ltd., No. 11 Broadway, New York. These people  
have offices in London and Buenos Aires, and I think their main  
office is in London. How soon may I expect the report?

FLD/INT

F. L. D.

Please note if NAME, BUSINESS and ADDRESS correspond with your inquiry.

AGAR, CROSS & CO. (LTD.)-----Comm. Merchants-----NEW YORK CITY.

Thomas F. Agar, President. :  
 Malcolm Cross, Vice-President, :  
 John Cross, Sec. & Treas. :  
 X

C/O 153 Oct. 20, 1908-----11 Broadway.

In an interview with Richard Agar, a director, in the latter part of July 1908, he averred that the above company was incorporated under the Private Limited Company's Act of England with headquarters at London. Stated further and showed corroboration of same that a certificate had been filed in the office of the Secretary of State at Albany, N. Y., May 21, 1908, for the purpose of having the privilege of doing business in this country; that of the authorized capital stock of 850,000 pounds sterling, some 300,000 pounds had been taken up by the officers and directors, while 50,000 pounds which was paid in in cash, was taken by the heads of different departments and their personal friends; that in addition the company had 300,000 pounds sterling which was voted to the members of the old firm for the use of their name, &c., the officers named above together with James S. Agar, Richard Agar and William A. Agar composing the Board of Directors, the corporation being successor to the old established firm of Agar, Cross & Co. At said interview in July 1908, Richard Agar added that the headquarters had been removed from Glasgow, Scotland, to London, Eng., with a branch at Buenos Ayres, S. A.

In the absence of the officers when a recent call was made at the office here, F. A. Gundlach, General Manager, stated that the working capital was on Sept. 10th, last, increased to 750,000 pounds sterling, the company making all purchases for cash and transacting business largely with South America, notably Buenos Ayres, and being agent there for several large and prominent manufacturing concerns in the United States, in the matter of sales. Gundlach added that a substantial dividend has been paid to the shareholders from the profits of the business.

The concern is regarded locally as one of large means and trustworthiness, a cash customer in the market, and standing high for engagements on its account.

(- 1)

C.M.A.

Please note if NAME, BUSINESS and ADDRESS correspond with your inquiry.

AGAR, CROSS & CO. (LTD.)-----Comm. Merchants-----NEW YORK CITY.

April 13, 1910-----11 Broadway.

This corporation though a foreign one in the matter of its headquarters, same being located in London, Eng., is highly regarded in banking and commercial circles locally and known as a cash buyer, and in the belief that capital and resources are ample credit is high.

(- 1)

H

[ATTACHMENT: FROM BRADSTREET CO. MAY 10, 1910]

289-8-8-09-- Con.

AGAR, CROSS & CO. LTD. -- Expts. Agricultural - NEW YORK CITY.  
 Thomas F. Agar, Managing Director, Implements etc (Manhattan)  
 London, Eng. 11 Broadway.  
 Malcolm Cross, Director, London, England. Rooms 901-2  
 John Cross, Sec. London, England. Home office, London, England.  
 Richard Agar, Managing Director, N. Y. City. Branch Buenos Ayres.  
 James S. Agar, Managing Director, Buenos Ayres, ARG. REP. ARG. REP.  
 William F. Agar, Director, Buenos Ayres, ARG. REP.  
 William C. Nicol, Director, Buenos Ayres, ARG. REP.

This business was originally established at Glasgow, Scotland, about 1879. In 1888 the firm opened a branch in New York City for the purchase and export of American goods, having previously been represented by local commission houses. Until about June 1, 1906 the firm consisted of Thomas Forrest Agar, Malcolm Cross, Richard Agar, James Agar and William Agar, but about that time the present company is said to have been incorporated under the laws of Great Britain, with headquarters at London, England and with an authorized capital of 850,000 Pounds sterling. Its principal store is at Buenos Ayres, Argentine Republic, where a considerable stock of goods is understood to be carried and where the company acts as local representative of many large American manufacturers of agricultural implements. The members of the old firm are directors of the present corporation and are looked upon as men of considerable individual means having many interests, and in high standing and repute abroad as well as in this country. The local representative is Richard Agar. The company is estimated worth \$1,000,000.

TRADE OPINIONS: Is in full credit for requirements, the account frequently being in the hundreds of thousands dollars on special long terms. Payments are prompt and the account is resisted by many reputable houses.

60-406----- H. Aa. --- August 6, 1908.

Wm. C. Agar

[FROM FRANK L. DYER]

Battery, St.

823

May 9, 1910.

Messrs. Agar, Cross & Co.,

11 Broadway,

New York City.

Gentlemen:

Yours of April 1st was duly received, and upon Mr. Edison's return from the South the matter was taken up with him and he feels favorably disposed toward your proposition provided it is definitely and clearly understood that the matter of protecting you in handling the Edison battery in Argentine, Paraguay and Uruguay shall rest entirely with him. In other words, he will be the judge of the question whether you are properly representing us in those countries. As I told you, however, I think you need have no fear but what you would be treated with absolute fairness in the matter, and I can point out as an example of what we are now doing the fact that we have thirteen thousand phonograph dealers in this country whom we protect in the same way. Even if we concluded, after trying out the matter, that you were not properly representing us and decided to sell to other people for the countries in question, we would still continue to sell you, provided our experience as to payments etc. had been satisfactory. I note that you would be willing to carry a constant stock as far as possible and would be willing to pay cash for your initial order.

Mr. Edison feels that since the great field for his

Agar, Cross & Co.

(2)

5/10/10.

battery in Argentine, Paraguay and Uruguay would be in connection with electric vehicles, it would be wise not to attempt to handle the battery alone, but that some arrangement should be made with representative houses to supply you with trucks and pleasure vehicles. As I told you, such an arrangement can be made with the Hanson Company, which has a most excellent record, and I would suggest that you put yourself in touch with the Anderson Carriage Co. of Detroit, Mich., or ~~W. H. Bailey & Co.~~ Bailey & Co., of Amesbury, Mass., both of whom make excellent pleasure vehicles designed especially for use with the Edison battery. By handling both trucks and pleasure vehicles, they could be sent complete to your consignees fully equipped with batteries, and there would, of course, be more or less business in our batteries alone when a number of vehicles were in use. If you can make satisfactory arrangements with the Anderson Carriage Co. or W. H. Bailey & Co., let me know and I will then take up the question of handling the Hanson vehicle.

So far as printed matter and complete data covering the efficiency, life, etc., of the Edison batteries are concerned, I can let you have these at any time and also electrotypes for your Spanish catalogues and pamphlets.

Of course you will understand from what I have written above that a final decision on the matter will have to wait until you have made arrangements with some vehicle concern and I know exactly what business you expect to do in this territory.

Yours very truly,

FID/IWW

Vice-President.

[MAY 10, 1910]

Burling TAE  
Harr

Outsend letter to  
Pembell or write critical  
Morrow says to do  
so - E

After working Morrow  
he says all right

Send ~~the~~ <sup>copy</sup> of his  
letter to

Pembell & say

Save the  
original  
letter  
in  
my desk

Enclose you <sup>copy</sup> Morrow's  
letter. I have only just  
seen him having been in  
Florida. Do you think him  
a good man to at least  
install the English works  
providing Morgan etc accept  
my proposition —

*But long J.P. Morgan*

MORGAN, GRENFELL & CO.  
LONDON.

Telegraphic Address.  
"MORGAN, LONDON"

J.P. MORGAN & CO.  
New York.

BRINLEY & CO.  
Philadelphia.

MORGAN, HARRIS & CO.  
Paris.

22, Old Broad Street,

LONDON, 10th May 1910.  
E.C.

Thos. A. Edison, Esq.,  
Orange, N.J. U.S.A.

*file*

Dear Sir,

Referring to the correspondence which we and ~~our~~ <sup>our</sup> predecessors have had the pleasure of having with you since 1904, our friends Messrs. J. P. Morgan & Co. of New York, enclosed us on 12th February last copy of letters from you to themselves dated 28th and 31st January.

We beg to say that we have carefully considered the papers sent us in reference to your Battery with a view to carrying out arrangements for its manufacture and use in England.

In view, however, of the improvements in Gasolene Engines on the one hand, and the cheapness of horse traction in London and other large cities here, we have felt doubtful of the special adaptability of your Battery to conditions in this country. Whereas we understand that in the United States and elsewhere the Battery has conclusively proved its usefulness, we do not feel certain that the same success could be expected here.

We thank you for the consideration you have shown in submitting the business to us, and should you enter into negotiations with other parties here we should wish the Battery and them every success.

Yours faithfully,

*Morgan Grenfell & Co*

*Agar, Cross & Company Limited*  
London  
Buenos Aires - Rosario  
New York

Telegram Address  
"Agarcross" New York, "Hales & Co." Ltd.  
901-903 Bowling Green Office  
11 Broadway

New York, May 13th, 1910.

Edison Storage Battery Company,  
Orange, N. J.

Dear Sirs:

We beg to acknowledge receipt of your letter of May 9th, and wish to thank you for the consideration shown. The terms of contract are entirely satisfactory to us, as we feel quite sure that we can give you a good representation.

Now, in regard to the carriage works, we would like to know if it is absolutely necessary to deal with the two concerns referred to in your letter. We have our own carriage works, i.e., a concern from whom we are taking about \$200,000 worth of carriages a year, and we had in mind to have this concern build for us a class of vehicles to be used in connection with your batteries, which we have no doubt will be satisfactory to you.

Relative to the Lamsden Co's. product, the writer expects that within two or three days Mr. Richard Agar, a Director of our Company, will be back in New York, when we will take him over to Newark to show him the Lamsden line.

As soon as we have been able to look into this matter more thoroughly - within the next two weeks - we will write you again.

Yours very truly,

G/R.

*Frank A. Cunningham*

*Wm Beechey*

*E. Agar*  
*C. Cross*

Bellevue  
City, N.Y.

H. F. Marshall, M.E., M.Inst.E.E.  
Consulting Engineer

TELEGRAMS: "PARSHALITE, LONDON."  
TELEPHONE: LONDON WALL 301.

Salisbury House,  
London Wall,  
London, E.C.

Please quote C 7864/6

May 17th 1910.

Thomas A. Edison, Esq.,  
Orange,  
NEW JERSEY.

MAY 28 1910

*No*

My dear Sir,

I have your letter of the 9th inst. I have known Mr. John T. Morrow for a good many years. He certainly has proved himself to be honest, energetic and intelligent. He has some knowledge of chemistry. If he were to take hold of the factory here in England, it would, I think, be necessary for him to work with you at Orange for sometime, so as to make himself entirely proficient. As you are aware, Bergmann is a very skilled manufacturer, but if my information is correct he did not succeed in making as good a battery as the one that you have been turning out in the States, or as good as the sample batteries which you have sent over here.

If the Morgans should undertake the business, I think Morrow, working under your direction, would be as good a man

Thomas A. Edison, Esq.

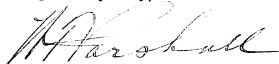
- 2 -

May 17th 1910.

as you would be likely to find.

With kind regards, I remain,

Yours very truly,

A handwritten signature in cursive script, appearing to read "W. F. Hall". The signature is written in dark ink and is positioned below the typed name "Yours very truly,".

Adm. - <sup>7E</sup> Handlar 1916  
TAK

Wm. H. H.  
5/21/10

My Dear Marshall

I had already told  
Jack Morgan that I thought  
he had better not go into  
the battery scheme in  
England. I saw from <sup>Report</sup> ~~Report~~  
~~Report~~ that there was  
no vehicles or instruments  
in England at present  
to warrant it. I also  
refused to take up the  
matter with Morgan  
Burgies at Paris  
until Bergmann makes the  
new battery he can't  
have any success  
Over here things are booming

The Erie + ~~also~~ Lockbaum  
have ~~the~~ taken up the subject  
of electricifying their suburban  
traffic with Storage Battery -  
Am making a cell which has  
enormous charge & discharge rate  
to be used on an electric  
Car does pulling 4 to 5  
ordinary cars, so far the  
figures are overpressing for  
small investment,

~~Edison~~

I will sign

Battery Storage

764

June 3, 1910.

Messrs. Harris & Mills,

23 Southampton Buildings, Chancery Lane,  
London, England.

Gentlemen:

Regarding the working of Mr. Edison's battery patents in England, I have already had some correspondence with you and have always understood that so long as Mr. Edison was making efforts to commercially perfect the battery in the United States and was not selling the same commercially it would not be reasonable to expect him to come once commercial manufacture in Great Britain and run the possible risk of failure. As I understood your position, if anyone attempted to bring about the cancellation of the Edison patents, the Comptroller would probably regard the situation as warranting an extension of time in which to commercially work the inventions in Great Britain.

A new situation has now arisen, on which I would like your opinion. Beginning last July the Edison battery was placed on the market in this country in a perfected and highly developed form. We believe it is now a finished product. The public are willing to pay a higher price for the Edison

(2)

battery than for the lead battery because of the advantages of the former, but there is a limit to the price we can obtain, because if the price is made too high the battery user might prefer to buy a number of successive sets of lead battery and when one set is worn out put in another set. The price to the public therefore being fixed by the public demand and by the comparison of the advantages of the Edison battery over the lead battery, we find that in order to manufacture the batteries at a sufficiently low ~~price~~ <sup>cost</sup> to permit us to sell them at the price the public are willing to pay and make a fair profit on the transaction, a considerable number of cells per day require to be made. In the United States we have made 250 cells per day and with this output can manufacture and sell them at a profit. If we only made 100 cells per day the cost would be so great that we would have to sell them at a loss. As the output increases to 500 or 1,000 cells per day or more, the cost of manufacture will be still further reduced and the price to the public can be also reduced.

Now in Great Britain there is little or no demand for Edison batteries and it may be two or three years before such demand exists, and when it comes it will probably be a reflection of the demand which has been created in this country. If Mr. Edison should start a factory in Great Britain, the probabilities are that for a year or so the demand for Edison batteries would not exceed 100 cells per day, and if this small number was made the business could not be carried on at a profit. The question, therefore, which I put to you for consideration is this: Must Mr. Edison

(3)

supply the demand in Great Britain by starting a factory there and commencing manufacture when he knows that for some time the number of batteries that can be sold will be so few in number that the operations cannot be carried on except at a loss? Or in other words, will he be permitted to supply the demand in Great Britain from the United States and when the British demand reaches the point of say 250 cells per day, when operations could be carried on in Great Britain at a profit, would he then be permitted without jeopardizing his patents to start a factory in Great Britain to commence manufacture there and supply the entire British trade from that factory?

I wish you would give these questions very careful consideration and if possible consult with other persons who may be able to assist you. I might say that the reason why I put these questions to you is that Mr. Edison has made arrangements for obtaining British capital to start a battery factory but he does not wish to commence operations with a reasonable certainty that for a year or so, until a sufficient demand in Great Britain has been created, the operations would be probably carried on at a loss.

Yours very truly,

FED/IWW

General Counsel.

Battery, NY

823

June 6, 1910.

Messrs. Agar, Cross & Co.,  
11 Broadway,

New York.

Gentlemen:

Yours of May 13th was duly received. Our only purpose in suggesting that if possible you make arrangements for handling either the Bailey or Detroit carriage in Argentine was that both of these vehicles have been especially designed for use with the Edison battery. The Edison battery, being considerably lighter than the ordinary lead battery, the vehicles for use with them can be proportionately lighter. It is also important that the motor should be wound to meet the characteristics of the Edison Battery, and both the Detroit and Bailey vehicles have motors which have been specially wound for this purpose. To use the Edison battery in a vehicle that was particularly designed for lead batteries would mean that the entire outfit would be unduly heavy and the motor would not give the best results, consequently, the Edison battery would not make as good a showing with such a vehicle as it is capable of with a vehicle especially designed for it.

Most of the builders of electric vehicles in this country know more or less about the Edison battery, and it is

(2)

possible that the concern with whom you deal may be qualified to build a vehicle that will answer the purpose all right. If you will tell me the name of this concern I will advise you on this point. If they would not be able to build a proper line of vehicles for the Edison battery, you might arrange to merely buy the chassis from the Detroit company or Bailey Company, ship these to Buenos Aires and have the wagon work done in that country. As a matter of fact, I should think this would be the most economical and satisfactory arrangement, because you would save freight on the bodies and they would be sure to be built in conformity with South American ideas.

Yours very truly,

FED/IWW

Vice-President.

**W.R. GRACE & Co.**

NEW YORK  
SAN FRANCISCO VALPARAISO  
LIMA SANTIAGO  
CALLAO CONCEPCION  
AREQUIPA VALDIVIA  
LA PAZ

GRACE BROTHERS & CO., LTD.  
LONDON.

CABLE ADDRESS "GRACE"  
HARVEY SQUARE,  
P.O. BOX 286

ADDRESS REPLY TO PURCHASING DEPARTMENT

NEW YORK

June 9th, 1910.

Edison Storage Battery Co.,

Orange,

N.J.

By \_\_\_\_\_ Attention Mr. Bee

JUN 11 1910

Gentlemen:-

In your favor of the 1st inst. regarding supplying us with storage batteries for Chile, we note you can only sell them with the understanding that we do not send them anywhere except to this country.

We would like to know if we are to understand from this that you are tied up in Peru, Bolivia and Ecuador, or if we would be allowed to sell there and at the same prices.

Yours very truly,

W.R. GRACE & CO.,

Purchasing Agent.

*mad*  
E.S.

*Mr. Dyer*  
*B*

Battery, S

978

June 13, 1910.

Messrs. W. R. Grace & Co.,

Purchasing Department,

P. O. Box 268, New York.

Gentlemen:

Replying to yours of the 9th inst., my purpose in stating that in the case of shipment of batteries to Chile they should be used in that country was to prevent the shipment of these batteries into Argentina and Brazil, with both of which territories we expect to make special arrangements. So far as Peru, Bolivia and Ecuador are concerned, we are free to make sales in those countries the same as in Chile, and there would be no objection so far as these four Republics are concerned (Chile, Peru, Bolivia and Ecuador) if the batteries were sent from one to the other.

Yours very truly,

FED/IWW

Vice-President.



HARRIS & MILLS,

(Incorporated in England)

CABLE ADDRESS,

"PATENTERS, LONDON"

ESTABLISHED 1866.

Bat & Eng

File Battery

23, Southampton Buildings,

London June 14<sup>th</sup> 1910.

Frank L. Dyer, Esq.

Orange N. Y.

Dear Sir,

W. Edison's Battery

We duly received your favor dated 3<sup>rd</sup> inst. and have looked through a digest of all the revocation cases. By book post we have sent you reports of all cases which in any way are interesting so far as the Edison battery is concerned. There has been

no case at present which at all corresponds with the conditions in the Edison case.

If we give you an opinion on if we go to Council, it can only be guess work. You can form an equally sound opinion based upon the reports sent.

So far as we know you have not attempted to create a demand for the goods in this country and you have not attempted to manufacture them or to license others to manufacture them here.

We are afraid that the fact that you cannot work profitably at the start will

21/



Frank L. Dyer Esq.  
23 Southampton Buildings,  
London June 14<sup>th</sup> 1910

not assist you. It frequently happens that a new industry cannot be worked profitably until the goods have been tried and a demand has arisen for them.

We are anxious that Mr. Edison should not lose his rights and this is the reason why we urge him to commence working as quickly as possible.

If you wish we will prepare a case for Council's opinion. Would you like us to go to a King's Counsel? The

difference between him and a good junior will be about £5.5.0

Yours faithfully,  
Harris & Mills

**W. R. GRACE & Co.**

NEW YORK  
SAN FRANCISCO VALPARAISO  
LIMA SANTIAGO  
CALLAO CONCEPCION  
AREQUIPA VALDIVIA

LA PAZ  
ADDRESS REPLY TO PURCHASING DEPARTMENT

CABLE ADDRESS "GRACE"  
MANHATTAN SQUARE,  
P.O. BOX 288

GRACE BROTHERS & CO., LTD.  
LONDON.

NEW YORK June 14, 1910.

The Edison Storage Battery Co.,

Orange, N.J.

Gentlemen:-

We acknowledge receipt of yours of the 13th inst. and are pleased to note that you will quote us on batteries for shipment to the Republics of Chile, Peru, Bolivia and Ecuador on the West Coast of South America.

We have recently received a copy of your catalogue, on page 48 of which we note price list covering cells and parts. Will you kindly advise us what discounts you will allow from these prices to cover delivery of the material P.A.s. Vessel, N.Y., packing for export to the countries above mentioned?

We should like to ask if you would consider appointing us your representatives for those countries, as we are equipped to push the sale of this material.

We are agents for a number of large American manufacturers, including the General Electric Co., The Ingersoll-Rand Co., The International Steam Pump Co., The Allis-Chalmers Co., (for Lining Machinery) and others.

We have our own offices in the principal cities, and a Technical staff consisting of electrical and mechanical engineers.

You will see that we are properly prepared to follow up any inquiry which may come in from those countries and properly present proposals covering this apparatus.

May we ask you to give us about 30 copies of your catalogue, so that we may place them in the hands of our technical men and prospective purchasers?

Yours very truly,

W. R. GRACE & CO.,

Purchasing Agent.

*M. Dyer*  
GHC:RRS

Battery, S.

978  
June 17, 1910.

ATTENTION OF PURCHASING DEPARTMENT.

Messrs. W. R. Grace & Company,  
P.O. Box 286,  
N.Y.C.

Gentlemen:-

Yours of the 14th inst. has been received and in accordance with your request, I hand you herewith 30 copies of our catalogues relating to the Edison Storage Battery. The maximum discount that we can allow from these prices is 20%, which is the discount allowed by us to the automobile manufacturers in this country. Possibly later on when the cost of manufacture can be reduced, these discounts may be somewhat increased, but we can give no definite assurance on this point. The prices in every case are F.O.B. Orange.

In regard to your suggestion that you should act as our representatives for the Republics of Chile, Peru, Bolivia and Ecuador, we do not make exclusive contracts for any given territory, but in a number of cases have agreed to protect concerns handling the battery in special fields by not selling to others and referring all inquiries and orders

#2

Messrs. W. R. Grace & Company.

to them so long as we feel that the business is being properly developed. We are willing to make this arrangement with you in the Republics named, retaining ourselves the right, however, at any time to terminate the arrangement if, in our opinion, the business is not being properly pushed. Of course until some definite arrangement is made regarding these Republics we would be very glad to fill your orders, but obviously we cannot allow our maximum discount of 20% on orders for single sample cells.

Yours very truly,

FLD/ARK.

Vice-President.

Friends.  
W N Stewart

Mr Edison

You gave  
W N Stewart a check  
for \$125.00 on Dec 22  
1904 and it was  
written off to Profit Loss  
Mar 31-1907

6/27/10 H Y M

142  
July 12, 1910.

Mr. Bee:-

I am returning herewith letter from Messrs. Melchior, Armstrong & Dessau. Please note Mr. Edison's memorandum attached thereto regarding sales of storage batteries in foreign countries. Orders must not be accepted or filled for batteries in France, Great Britain, Germany, Austria, Hungary and Canada. In the following countries, to the list price, less discount, should be added royalties at 60 cents per cell for A-4 cell, 90 cents per cell for A-6 cell, \$1.20 per cell for A-8 cell, and in the same proportion for all cells:

Belgium	New South Wales
Italy	Russia
India	Spain
Japan	Switzerland
Mexico	Sweden
	Victoria

In all other countries not mentioned above, sales can be made without royalty.

F. L. Dyer.

FLD/ARK.

Battery Catalogue

WILLIAM S. HULSE,  
80 CHURCH STREET,  
NEW YORK.

REMARK: "CONSUMER,"  
LONDON AND THE CODE,  
TELEPHONE THE COMPANY.

August 1, 1910

Thor. A. Edison, Esq.,

Llewellyn Park, N. J.

Dear Mr. Edison:-

I have just received a note from Dr. Rethenau, in which he asks that you kindly accept his sincere thanks for the signed copy of your battery catalogue, as well as his friendliest greetings and best wishes.

Yours very truly,

William S. Hulse

WHS/B

FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF  
BEACH CARS

EQUIPPED WITH  
EDISON STORAGE BATTERIES

1778 HUDSON TERMINAL  
50 CHURCH STREET  
PHONE 3336 CORTLANDT  
NEW YORK CITY

Dec. 15, 1910.

Mr. Frank L. Dyer,  
V.P. & Genl Counsel,  
Edison Storage Battery Co.,  
ORANGE, N.J.

My dear Dyer:

Enclosed you will please find a letter from Messrs. C. Tonant  
Sons & Co., E. H. Hunter & Co. of this City, Agents. I am not sure  
whether I have written you about these people before or not. They  
are a good house and want the agency for the battery and the cars in  
Japan. It is difficult to say who to give the agency to. We  
have told them that if they would buy one or two cars for demon-  
stration purposes in Japan we would give them the agency. Of  
course in regard to the battery I have said nothing.

Yours truly,

FEDERAL STORAGE BATTERY CAR COMPANY.

*R. H. Beach*  
President. *l*

R/HD  
ENC

*Am*

Battery, St.

Dec. 22, 1910.

R. H. Beach, Esq.,  
Federal Storage Battery Car Co.,  
1779 Hudson Terminal Building,  
New York City.

Dear Mr. Beach:

Yours of the 15th inst. was duly received with enclosed letter from Messrs. C. Tennant Sons & Co. as agents of E. H. Hunter & Co. of Japan. I have already had some correspondence with those people, but nothing seemed to come of it because they apparently will not be satisfied with anything but a formal contract tying up Mr. Edison for a period of years and which, of course, he will not make.

I have been having some correspondence with the Kawasaki Dockyard Co., Ltd., of Kobe, Japan, in reference to the battery in Japan, and have put up to them the same proposition as to Bergmann for handling Germany, i.e., first go into the manufacture or importation of vehicles and when a sufficient demand has been created to then commence the manufacture of the battery. I do not know whether anything will come of this correspondence, but they sent a man over here last year and he took back a sample battery with him. He reports that his people are very much interested. I find that they are a large concern and have done considerable business with the General Electric Co. Of course if they

take up our proposition for Japan it might be a little embarrassing to have your car handled by anyone else, but at the same time, since the whole matter is more or less indefinite, I could not suggest that you should let up in your efforts to interest E. H. Hunter & Co. I do feel, however, that in considering the granting of any foreign rights we ought to keep as close together as possible, so that your car and our batteries may always get in the same hands. Don't you think it would be well for us to have a general discussion of these matters and agree not to take up the question of agencies except in a <sup>general</sup> ~~general~~ <sup>standpoint</sup> ~~standpoint~~?

FID/IVT

Vice-President.

Battery Storage <sup>no date</sup>  
Dyer

2

Dyer = I think our policy should be to hitch up with some big firm in Japan who will agree to build street cars, motorbuses, trucks & pleasure vehicles & lift the heavier parts of the battery. We're making & shipping the elements, and do it on the basis of a royalty and when the business should have reached a point whereby a factory is warranted then we come to receive the royalty just the same & a portion of the stock of the battery factory for which we will furnish one expert & all the drawings & data.

We should however get undoubted information as to the standing of the firm -

You could call attention to the fact that by means of the battery, which will form but a small part, a very large enterprise can be built up in N.Y. the things that will lift the battery, from which we will receive nothing & therefore we should be given a liberal royalty.

E.C. I have no idea as to how you can get their standing

3

but think Japanese  
houses in Wey & the  
foreign agts of Dun-  
Baldern can give it

Σ

**1910. Battery - Storage - Foreign - Bergmann, Sigmund (D-10-08)**

This folder contains correspondence and other documents relating to the manufacture and sale of Edison storage batteries by Sigmund Bergmann and his Deutsche Edison-Accumulatoren-Co. Included are items pertaining to machinery and material for the batteries, the outfitting of the Bergmann Electrical Works, the finances of the Deutsche Edison-Accumulatoren-Co., and the use of storage batteries in streetcars. Among the correspondents are Frank L. Dyer, vice president of the Edison Storage Battery Co., and O. A. Rogers, who was sent to Berlin to assist Bergmann in preparing machine tools for the improved battery.

Approximately 60 percent of the documents have been selected. The items not selected include letters of transmittal and introduction, minutes of a company board meeting, and documents that duplicate information in selected material.

decap. 33 &  
Jan 11

Jan. 11-1910

Sent Six Tube Cables  
with Rogers material -  
Cable Edison

Berlin -

Jan. 11-1910.

Dodge - G/o Edison. N.Y. to Dodge

Harry send Clev to Dodge

"Rogers arrived there has been  
feat disconnection

and inf. that cell has been  
signed downed for the  
Edison cell cable

not been sent  
of sent sent Cable

via Postel - 9:20 a.m. 1/11/10 - Sam

Postal Telegraph Cable

Berlin - Jan 22<sup>nd</sup> 1/10

Edison:

Orange

Why don't you

send us - as requested -

seventy bells of new

Battery good or bad.

Bergman

Edison cell Berlin

Bells shipped eighteenth

Edison

Sent via Postel 11:20 am 1/21/10

197  
My dear Mr. Flyer

Berlin Feb<sup>10</sup> 1911

Received cells from Grange, but are having trouble getting lithium, but expect it in a few days & will get cells on test. Have not started on new crane building yet.

Have started on quite a number of the tools, that is small tools for the cell, also for iron filling machines, and changing old tube loading machine, crimping dies, and machine for putting rings on tubes.

Mr. Bergaman has gone to Italy for a short time and think he will be back about the 1<sup>st</sup> of April. I think when he returns work will go faster, or at least I hope so.

I will have to start an inspection department, as they haven't any. Had a long talk with Mr. Hammerhoff to-day about it, and he agreed with me that it was needed.

2

Enclosed will find an order for 2 or lbs. of nickel hydrate ground, and screened, as I want it for a test lot to check the flake and machine, so that when we make flake, that we can test it with the same hydrate for the different size, and will act as a standard and have also sent an order for 25 lbs. of nickel flake as a standard so we can make tubes for test and know we are right.

Have been troubled with my stomach quite some, when Dr. Goldscheider a specialist on stomach & duodenum, and stayed at his sanatorium for three days, in order to find out the trouble, and it puzzled them, so they had to take X-ray photos of the stomach. They found there had been an ulcer there and that it never had been properly healed, and by taking the treatment and following his instructions will not be troubled any more, feeling fine now. Yours, B. Rogers.

THOMAS A. EDISON, President.

W. S. MALLORY, Vice-President.

H. F. MILLER, Secretary-Treasurer.

## EDISON CHEMICAL WORKS.

TELEPHONE "1086 BLOOMFIELD."

SILVER LAKE, N. J., Mar./1/10.

Mr. P. I. Dyer,

Edison Phonograph Works,

Orange, N. J.

Dear Sir:-

I am in receipt today of your letter of the 28th, regarding shipment of 200 lbs. nickel-hydrate to Rogers at Berlin. I note in Mr. Rogers' letter that he asks for hydrate ground and screened. We do not grind and screen the hydrate down here, same being done at Orange, and therefore I have asked Mr. Dodge to see that this material is shipped to Mr. Rogers and he informed me that he already has shipped the "lake and will send the 200 lbs. of hydrate. I enclose the letter from Mr. Rogers and have sent the order to Mr. Dodge.

Trusting that this will be satisfactory I remain,

Yours truly,

*Yours truly,*  
*W. S. Mallory*

[MARCH 22, 1910]

Dyer =

Please get from Beach actual  
data of car & what it does &  
send to Bergman so he can answer  
this letter intelligently. Today I have  
sent Harry Miller an answer to the  
letter of Hendrick of Finnish RR  
asking for information - Bergman  
is the man to do this Car business.  
Write Bergman & Explain.

Σ

Wester -  
When Logs data from  
Beach, from Lake then it  
also go from Miller  
about letter from  
Inches  
Dyer

Batteries  
Germany

Deutsche  
Edison-Akkumulatoren-Company

G. m. b. H.

Bank-Conto:  
Deutsche Bank, Berlin.

Telegramm-Adresse:  
Edisoncell.

Fernsprech-Anschluss:  
Amt 2, No. 873.

A. B. C. Code (42. u. 23. Edition)  
and Lieber's Code used.

Berlin N., den 24. March 1890  
Drontheimerstr. 35-36.

Ans 4/15

sent to Mr. Morgan  
advice

Thomas A. Edison, Esq.,

Orange

My dear Mr. Edison,

I am in receipt of your favor of Febr. the 24th re =  
garding cablegram in the New-York-World of Febr. 12th. *I think it will be favorable*

I can only tell you, that the authorities of the  
Prussian railways are desirous to know, whether your accumulator  
can be used for driving the big cars, which up to now are fitted  
with lead accumulators. Such a car carries a lead accumulator with  
a capacity of about 100 Kilowatthours, the weight of the cells  
being about 17 tons. The car runs as long as the lead cells are  
new about 60 miles with one charge. We have offered your batteries  
for this purpose, i.e. big cells of about 1000 Ampèrehours capa-  
city. Our prices are of course extremely high compared with the  
lead cells, but we hope, that our negotiations finally will show  
good results.

Rogers is here since beginning of January and I thank  
you very much, that you have send him over. His many experiences  
will be of great value for us and I hope, that after a short time

*Deutsche Edison-Akkumulatoren-Company*

*G. m. b. H.*

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- 2 -

Thomas A. Edison Esq., O r a n g e  
we will be in the position to manufacture the new cell on a small  
scale.

You would to do me a great favor if you would let me  
know, whether you intend to start business in England this year.  
If that should be the case I hope, that you will give me the order  
for the machinery for the new factory as you promised me.

Hoping you in good health and awaiting a favorable  
answer, I am with kindest regards

Yours very truly

*R. Reumann.*

*Deutsche*  
**Edison-Akkumulatoren-Company**  
*G. m. b. H.*

*Bank-Conto:*  
Deutsche Bank, Berlin.

*Telegramm-Adresse:*  
Edisoncell.

*Fernsprech-Anschluss:*  
Amt 2, No. 873.

*A. B. C. Code (12<sup>th</sup> u. 13<sup>th</sup> Edition)  
and Liebig-Code used.*

Thomas A. Edison, Esq.,  
Orange

Berlin *N.*, den April 1st 1910  
Drantheimerstr. 35-36.

APR 13 1910

*Under - Battery not as  
soon as data is used  
from Beach  
H. J.*

Dear Sir,

Our customers, in the first place railway-people and manufacturers of railway-cars are very interested to hear details about the trials, which you are making there in New-York and Orange with the new battery type A. We therefore beg to ask you, to send us some datas about the street-cars, which are since a couple of weeks running with the new battery. We would also like to have, if possible, some photos like those, which you supplied to "Scientific American", issue of February 5th. It would of course be of great value for us, if we could explain our customers, under which conditions the new battery is working, i. e. number of cells, discharging rate by running on level road, mileage with one charge, total-weight of car, speed per hour.

We further beg you, not to give any datas about the new battery to other people here in Europe in order to prevent, that the Technical Journals in these countries might publish reports, which are not right.

*Deutsche Edison-Akkumulatoren-Company*  
G. m. b. H.

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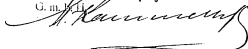
- 2 -

Thomas A. Edison, Esq., Orange

Hoping to hear from you in this respect and thanking  
you in advance for your kind efforts, we are

Yours very truly

Deutsche Edison-Akkumulatoren-Company  
G. m. b. H.



## NATIONAL PHONOGRAPH COMPANY

197

April 8, 1910.

S. Bergmann, Esq.,  
Deutsche Edison Akkumulatoren Co.,  
Brentheimer Str. 35-36,  
Berlin, Germany.

Dear Mr. Bergmann:

We have received an inquiry from David Rapp, Limited, of Stockholm, Sweden, for information regarding the Edison battery in Sweden. This inquiry came through the Swedish Chamber of Commerce of New York, who say that this is a large concern. Mr. Edison requests me to have you get in touch with these people and see what they want. He says that he wants you to handle the battery in Norway and Sweden subject to cancellation at any time. With this understanding, I wish you would get in touch with this concern and advise them fully regarding the battery.

Yours very truly,

FLB/ITW

Vice-President.

See David Rapp & Co.  
for Mr. Edison's mission  
re Norway & Sweden  
and Bergmann

*Bottling - Germany*

71 BROADWAY.  
NEW YORK.

*Wrote that Mr  
Edison would not  
return until next week*

April 18, 1910

Thomas A. Edison, Esq.,  
Orange,  
New Jersey.

*Ans 4/23/10*

Dear Mr. Edison:

Mr. Paul Mankiewitz, a Director of the Deutsche Bank, largely interested in electrical matters in Berlin, will gladly avail of an opportunity to call upon you some time next week, if you will kindly make an appointment therefor, preferably some afternoon, and give him several days' advance notice, so that he may arrange his engagements accordingly.

The Deutsche Bank, you may remember, has financed many issues of electrical securities, including those of Siemens & Halske, the Berlin Electrical Company, and the Bergmann Electrical Works.

Thanking you in anticipation of your usual courtesy in these matters, I am

Sincerely yours

*Edward D. Snodgrass*

Battery - Germany



MACHINE DEPARTMENT

*Please quote*

Bnn/WH

Thomas A. Edison Esq.,

Llewellyn park,

Orange.

New Jersey.

MAY 4-1910  
Ans 5/6/10  
GOC

My dear Edison.

Mr. Kammerhof, Mr. Rogers and I have just had a conference with regard to the new Edison battery, and we have come to the conclusion that, in order to get started with the new battery quickly and push it well commercially we must know exactly what the new flake is going to cost us.

It needs quite a big apparatus for the manufacture of this nickle flake, and we have no room to spare for this machine at present in our factory, so that, if we were ourselves to take up the manufacture of the flake, it would mean building a new factory department.

Would it not be possible for you to sell us the flake, at a small profit to yourself, for about a year to come? This would facilitate matters considerably, and we should then be absolutely certain beforehand how much the battery costs to make.

[ON BACK OF PRECEDING PAGE]

I do not see how we could spare any flake we  
now work night & day to supply ourselves &  
we should have to stop mfg to the extent  
of the amount you take = The flake  
making apparatus is cheaply easily  
made & Mr. Rogers knows all about  
it & we could give you full instructions

It's the simplest imaginable thing  
to do = I understood you had  
plenty of room =

The English Expert has made his report  
I expect to hear from them in few  
weeks. He went into the thing thoroughly  
it's a large report & is extraordinarily  
favorable. ~~He~~ Heavens! Co. have just  
thrown out their lead & taken ours  
their books show that naturally & casually they pay  
us  $2\frac{1}{2}$  times as much as lead ours is the cheapest  
 $\frac{1}{2}$  of their vehicles were Lead &  $\frac{1}{2}$  Edison for past 4 years

BERGMANN ELECTRICAL WORKS (MACHINE DEPARTMENT).

-2-

Thomas A. Edison, Orange.

We are going ahead at full speed with all the other tools and machinery necessary for this battery, such as filling machines for the tubes, and grinders, as well as pressing machines, rolls, etc., and are trying to turn them out as quickly as ever possible.

If you could send us over one of your new type filling machines, this would also help to expedite matters considerably, as the machine we are now using is merely an adaptation of the old one.

Mr. Rogers has also written to Dyer with regard to flakes, and I hope that you will see your way clear to send us a small quantity at once, as that which we have here and which we can manufacture is a mere bagatelle.

I have received the good news from Mrs. Edison that you are all coming over here in August. I only hope that this has now been definitely settled, and that you will really keep your promise this time.

With best wishes,

Sincerely yours,

*Bergmann.*

197  
April 26, 1910.

Deutsche Edison Akkumulatoren Company,  
Drontheimerstr. 35-38,  
Berlin, N., Germany.

Gentlemen:

Yours of the 1st inst. was duly received, and I referred the same to Mr. R. H. Beach, who has been developing the street railroad car for use with the Edison battery in collaboration with Mr. Edison.

I beg to hand you herewith a copy of Mr. Beach's letter to me of the 19th inst., which I think covers all the points to which you refer, and which will enable you to satisfactorily answer any questions concerning this car. As soon as the Engineers' report is received from the General Electric Company I will send a copy of the same to you.

In this connection please note that Mr. Edison, at the present time at least, wishes to have the matter of this car handled by you in Europe, subject, of course, to a future arrangement as to precise terms. I make this explanation because the arrangement between Mr. Edison and Mr. Beach is not entirely definite. Mr. Beach has been developing the car under Mr. Edison's direction, and the only thing so far arranged is that if the car meets with Mr. Edison's approval he will supply batteries for operating the same. Therefore, Mr. Edison is not entirely free to conclude arrangements which will bind Mr. Beach so far as

(2)

Europe is concerned, but I have no doubt that Mr. Beach will be guided very largely by what Mr. Edison may wish to have done in the matter. Under the circumstances I think you would be quite safe in going ahead and offering to take up the car proposition in Europe if a good opportunity arises, leaving the matter of the details of the arrangement to be concluded subsequently.

In this connection, I beg to hand you herewith a letter from Mr. Francis Koch of St. Petersburg relating to the Edison battery, and which I wish you would answer direct from Berlin. Mr. Koch was introduced to Mr. Edison by the American Consul in St. Petersburg, and I wish, therefore, that you would give the letter special consideration.

Yours very truly,

FEB/IWW

Vice-President.

Deutsche  
Edison-Akkumulatoren-Company

G. m. b. H.

Bank-Conto:  
Deutsche Bank, Berlin

Telegramm-Adresse:  
Edisoncell.

Fernsprech-Anschluss:  
Nimt 2, No. 873.

A. B. C. Code (10<sup>th</sup> u. 12<sup>th</sup> Edition)  
and Lieber 10<sup>th</sup> used.

Berlin D., den June 6th 10  
Brannhelmerstr. 35-38.

Mr. Frank L. Dyer,  
c/o. Edison Storage Battery Co..

Orange

Dear Sir,

We herewith beg to acknowledge receipt of your favor of April the 26th and have studied the report of Mr. R.H. Beach thoroughly. We find in the report very interesting datas, but would like to have also the Engineer-Report of the General Electric-Company, which you mention in your letter and which in the meantime may have reached you. In his letter Mr. R.H. Beach speaks of detailed description, but this reprint we did not get. Please let us have it if possible. Regarding handling of business of those cars in Europe we note with thanks, that Mr. Edison wants us to look after this matter. We will only be to glad to do what is in our power to go ahead in offering and selling those cars together with batteries. It is however understood, that it is absolutely necessary to have some datas about prices, measurements etc. in order to negotiate with our customers. Probably Mr. R.H. Beach will now be in the position, to let us have drawings of the details of the car including information about weight etc.

Furthermore we would like to know, under which conditions we can either buy this car from Mr. R.H. Beach or his

*Deutsche Edison-Akkumulatoren-Company*

G. m. b. H.

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- 2 -

Mr. Frank L. Dyer, Orange

concern, or in what way we can negotiate with German firms, who built such cars here in Germany.

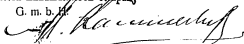
Regarding Mr. Francis Koch of St. Petersburg would say, that we have written to this Gentleman, but received the answer, that he wants to wait until we are able to supply the new cells type A. It will of course still take some time, before we are through with tools and machinery for the new cells.

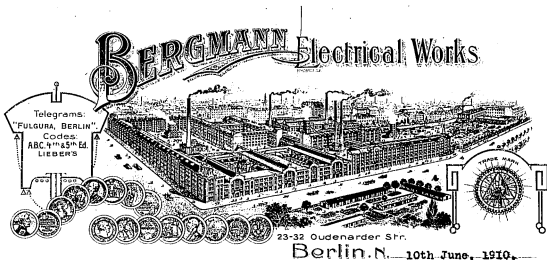
Hoping to get some more informations from you and thanking you in advance for your kind efforts, we are

Yours very truly

Deutsche Edison-Akkumulatoren-Company

G. m. b. H.





MACHINE DEPARTMENT

*Please reply please quote*

Bnn/WH

Thomas A. Edison Esq.,

Llewellyn Park,

Orange.

New Jersey.

JUN 21 1910

My dear Edison,

I am in receipt of a letter, dated May 6th, from your Laboratory, signed in your name, but not by you, and, as I do not know whether you are acquainted with the contents of same, I am sending you a copy herewith.

I am very sorry to hear that you cannot supply us with even a limited quantity of nickle flake, in order to enable us to make a quicker start with the new battery. If we were to put up a plant to make nickle flake according to Rogers' instructions, it would simply mean that we should have to invest another \$ 75,000.- to \$ 100,000.-, as we should have to put up more buildings and machinery for this purpose. This is at present practically impossible, as I have not the courage to ask the Shareholders of the Deutsche Edison-Akkumulatoren-Company to put any more money into the concern just now. We are

BERGMANN ELECTRICAL WORKS (MACHINE DEPARTMENT).

-2-

Thomas A. Edison Esq., Orange.

obliged to show them a little progress, and we think we can do this more quickly with the old battery of our different types, for the various purposes for which we are now manufacturing them, although in comparatively small quantities.

Furthermore, we must first be quite sure that we have a good market for this new battery, which costs considerably more to produce than the old type, although I, personally, am of course fully persuaded that the new one is much the better of the two.

Now, if you want to help us to find a market for this new battery and to push same, without our having to make the investment mentioned above, you can do so by sending us, say, 150 cells complete, of types A 4 and A 6, and also by sending us, if possible, say, 100 kilos of nickle flake, at the cheapest rate you can for both.

We should then be able to get a good start with the new battery and place it more favourably on the market, and we should, at the same time, be able to manufacture a certain number of cells ourselves.

I very much regret to hear from Mrs. Edison to-day that you will not, after all, be able to come over here by August, but I hope you will still make good your promise next Spring.

In this letter from your Laboratory it is stated that the English experts have reported very favourably. This is certainly very good news. Can you let me know when you think this English Company will be started? I should like to know, as it takes quite some time, as you know, to fit up a plant for the manufacture of the battery, and it will also take us a considerable time, in case you wish

BERGMANN ELECTRICAL WORKS (MACHINE DEPARTMENT).

-3-

Thomas A. Edison, Esq., Orange.

to give us the order, to make the machinery for the English Company,

Please answer this letter by return mail, and oblige,

Yours very truly,

*Bergmann.*

[ENCLOSURE]

From  
Bergmann Electrical Works, Dept. M., Berlin.

Enclosure to our letter of 10.6.10.

M Thomas A. Edison Esq.,

Orange.



[ENCLOSURE]

BERGMANN ELECTRICAL WORKS (MACHINE DEPARTMENT).

C o p y .

Form the Laboratory

of

Thomas A. Edison,

Orange, N.J. May 4th, 10.

S. Bergmann Esq.,  
23, Oudenarder Str.,  
Berlin, N. Germany.

Dear Mr. Bergmann:

Your letter of the 23rd ult. received. I do not see how we could spare any flake. We now work night and day to supply ourselves and we should have to stop manufacturing to the extent of the amount you take.

The flake making apparatus is cheaply and easily made, and Mr. Rogers knows all about it, and we could give you full instructions. It's the simplest imaginable thing to do. I understood you had plenty of room.

The English expert has made his report and I expect to hear from them in a few weeks. He went into the thing thoroughly. It's a large report and is extraordinarily favourable.

Hearn and Company have just thrown out their lead batteries and taken ours. Their books show that notwithstanding they pay us two and one half times as much as lead, ours is the cheapest. One half of their vehicles were lead and one half Edison for the past four years.

Yours very truly,

(Signed)

Thos. A. Edison  
N.

✓  
Bd - Jensen

Ans  
June 21 - 1910

My Dear Bergman

If I should give you <sup>a regular</sup> supply  
of flake it would disorganize  
our whole business here.

I cannot understand why  
you speak of \$75,000 in  
re a flake plant, 5000  
dollars would make the  
machinery & you could  
go to Sweden or Norway  
to a water power station  
& put up a wooden shed  
& with 12 men make all the  
flake you need for a while  
& do it far cheaper than  
I am doing it <sup>now</sup> ~~there~~ or  
<sup>near some power station in Sweden or Norway</sup>  
You could ship the

2

Sheets to Berlin & cut  
them into squares & separate  
chemically all right,  
~~the~~ our crane will do  
for 60 calls per day —

I shall probably move  
my flake plant to  
~~Staple~~ North Carolina next  
year to get cheap power

I could ship you 100  
pounds of flake but  
it would do you no  
good because I couldn't  
~~keep~~ give you a continuous  
supply. The cost of the  
flake to us is 68 cents  
for A 4 call.

3

I could probably furnish you enough flake for say 30 or 40 cells per day for next 2 or perhaps 3 months, but you would not be able to use the nickel hydroxide you now make for the grafts & E type but would have to make the nickel as we make it for tube cells or I could send it to you for the 30 @ 40 cells daily until you get it right. If I do this you will have to put up one Coors somewhere to take up the manufacturing of flake when a point is reached that we cannot supply

Regularly 4

The dead cost of flake to us is 68 cents per A4 cell - I am working at it & feel sure we shall in time get the cost down to 50 cents per A4 cell -

~~I am looking at A4 cell~~  
~~specimen which shows dia~~  
~~meter giving very high~~  
~~charging rates up to~~  
~~1000 after which it goes to~~  
~~68~~  
~~put out a storage battery~~  
~~considerable to test on~~

5

We are running mileage tests on family Electrics now.

Have 2 different makes, 2 persons they go over routes & make from 120 to 144 miles according to roads, 100 mile routes giving a days outing from the City is gone over & on return the vehicle is run to a standard showing from 15 to 35 miles still left. These runs with maps are to be run as advertisements to show the public what they can do safely. The Anderson Carriage Co of Detroit are doing a large business in family Vehicles are selling about 80 sets of

6

40 A6 per month, they are increasing their shop & say they will sell 200 sets month. The public are delighted with the long mileage.

I send you the latest Curve of A4 test cells on the 700th run the electrolyte will be renewed again & it will undoubtedly stand be better than when it started. Whereas you will see that E Type under these severe conditions of this test was down about after 100 runs. This Curve shows that in a delivery

4  
Wagon it will be good  
for at least 6 years or  
more working 284 days a  
year judging from the E type  
which goes 2 years or more  
on a family Electric  
its life would be enormously  
Extended -

E  
I will sign  
M

Best - Germany

Deutsche  
Edison - Akkumulatoren - Company  
G. m. b. H.

Bank-Conto:  
Deutsche Bank, Berlin.

Telegramm - Adresse:  
Edisoncell.

Fernsprech - Anschluss:  
Amt 2, No. 873.

A. B. C. Code (2<sup>nd</sup> u. 3<sup>rd</sup> Edition)  
and Lieber's Code used.

Berlin N., den June 22nd 10  
Brandenburgerstr. 35-38.

MA 20 1310

*Am 27/10*

Thomas A. Edison, Esq.

Orange New Jersey U.S.A.

My dear Edison,

I herewith beg to acknowledge receipt of your favor of May the 29th, in which you write me about Locomotives for the railways, running between New-York and New-Haven etc. I can only tell you, that I am very glad to hear, that you already intend to go ahead and put your new battery in Locomotives. There will no doubt be a big market for the battery as soon as the first trial shows, that you can compete in regard to power, speed and costs with steam-locomotives.

On the other hand I see, that you now have come to the conclusion, to change the construction of your new cell in that way, that the charging and discharging time can be considerably cut down. This is, as far as I can judge, a very important step. Our competition against the lead battery has always been very difficult owing to the fact, that for many purposes we are bound to put in an Electromobile a battery, that has a higher capacity as necessary or wanted. This of course increases very often the selling price more than

*Deutsche Edison-Akkumulatoren-Company*

G. m. b. H.

---

- 2 -

Thomas A. Edison, Esq., Orange.  
desirable.

I would like to get from you as soon as possible drawings and description, i.e. every details of the new construction in order to be able to manufacture those cells with tubes of 1/8 inch diameter, because I am the meaning, that we can make far better use of these cells than of those fitted with tubes of 1/4 inch diameter.

Today I got your favor of the 8th inst. regarding the mining lamps, which we have made here. I note with pleasure, that you think, you can make use of these lamps over there in the United States and will send you as soon as possible a dozen of the different lamps including small cells. I hope you will find a market for the same. The low price, at which we sell our lamps and cells would surely enable you to sell these in the United States in spite of the heavy duty.

In connection with your letter of the 8th inst. I want to ask you whether you agree, that I sell these mining lamps also to England. I put this question before you, because you send me a letter, which was written to you by a gentleman, named Gui Simonds, Newcastle, England, who wants to buy electric handlamps from you.

Your letter of the 8th inst. is not quite clear in that respect and I hesitate to send any cells and lamps to England as long as you did not agree to it.

- 2 -

*Deutsche Edison-Akkumulatoren-Company*

*G. m. b. H.*

---

-3-

Thomas A. Edison, Esq., Orange.

Hoping you in good health, I am with kindest regards

Yours very truly

*Bergmann.*

17  
~~July 10, 1920~~ <sup>Philadelphia</sup>  
Dear Mr. Dyer

The battery business seems to be picking up considerably here. They have an order for 1440 cells 4 L7 that is 20 battoms of 72 cells each also for 14 taxi cabs which the Deegerman works are going to build. This is a new company that is

formed in Hamburg & they expect to put in about two cable, and Mr. Kammerhoff says it would be a great thing for the battery Co. if Mr. Edison would permit them to build automobiles in connection with the battery.

The last letter Mr. Edison wrote to Mr. Bergermann, showing the Blue Print has done a great deal of good as it showed the life of the old cell and how the new one is still improving, as there beginning to realize that it is the life of the cell that is wanted, they are also very anxious about the small size for the high <sup>dis</sup>charge rate for automobile work, as

They say the mileage  
in Germany is not  
needed as it is in  
the States then they  
could use the small-  
er type all instead  
of the larger type.

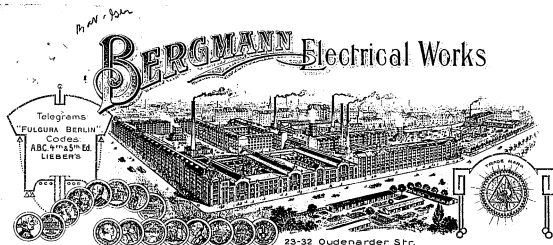
Mr. Bergermann was  
very much pleased  
with Mr. Bohrer's photo-  
has taken it home  
to put in his parlor  
and Mr. Kimmachoff  
thought it fine &  
asked for one for  
his office, and

asked me to ask  
for one for him.

Should like the  
same for Mr. Ber-  
germann's office.

Hopeing it is not  
asking too much of  
you, and that  
you are in good  
health, as this leaves  
me all well.

Sincerely O. Rogers.



MACHINE DEPARTMENT

*In reply please quote*

Bnn/vh

Thomas Edison Esq.,

Greenleaf Park,

Orange.

New Jersey.

My dear Edison,

I have received your letter of June 21st, and am glad to hear the good news contained therein. However, before we can possibly expend the small amount of capital left out of the three millions, we must have your statement corroborated, as I simply cannot ask our Shareholders for anymore money until I can give them my personal assurance that a further investment is justified.

I have, therefore, come to the conclusion that it would be the best plan of all to send Mr. Kammerhof over there once more, so that he can go thoroughly into the details of the new and improved battery. I first of all thought of sending Rogers with him, but, apart from the extra expense, it is necessary that somebody should be here to look after the workshops. I am, therefore, going to leave it to Kammerhof's judgment to telegraph for Rogers' assistance or not

BERGMANN ELECTRICAL WORKS (MACHINE DEPARTMENT).

-2-

Thomas A. Edison Esq.,      Orange.

when he arrives in America, according to whether he deems it necessary for Rogers to come over or not.

I am sure you will agree with me that this is the best way to settle the matter, and that you will give Kammerhof the same free hand to go into the details as you did before.      He can also then arrange with you regarding furnishing hydrate, flake, and so forth, so that we shall be able to begin with the new battery immediately on his return.

I must also ask you to let us have one of the filling machines which make the small tubes.

I assure you that if you can help us now to quiet down the Shareholders, you would do me a personal favour.      They are getting very "ugly" now, and talking about suing me for getting them to subscribe for the Stock for the Deutsche Edison Akkumulatoren Company under false pretences, and I know if you will help me that we can quiet them down, and probably show them that they have not spent their money in vain.

Yours sincerely,

*Bergmann.*

1911

July 25, 1910.

Deutsche Edison Akkumulatoren Co.,  
Brenthaimerstr. 35-38,  
Berlin, W., Germany.

Gentlemen:

Your favor of June 6th was duly received in reference to the Beach car operated by Edison batteries, and the delay in answering has been due to the difficulty in getting the requisite data from Mr. Beach. I send you under separate cover a booklet giving photographs of the car and drawings thereof, and also a copy of a letter dated April 27, 1910, from the Engineering Department of the General Electric Co., together with a copy of tests of the car made by the General Electric Co. Mr. Beach advises me that he is not yet ready to furnish complete working drawings, but he suggests that you should order a complete car, which can be shipped to Germany knocked-down, so as to be copied by you. Let me know what you think of this suggestion and I will then take up the matter with Mr. Edison and get his opinion.

Mr. Beach has no definite proposition to make regarding taking up the car in Germany, nor have I any suggestions, as I am quite unfamiliar with the tram car situation in Germany. Assuming the car to be what these tests indicate, what business do you think could be done in Germany with it? You might make a tentative proposition as to what you think the German Company could do

Deutsche Edison Al. Co.

(2)

7/25/10.

I will then discuss the matter with Mr. Edison.

Yours very truly,

EDD/IWW

Vice-President.

Enc-

[ATTACHMENT]

FEDERAL STORAGE BATTERY CAR COMPANY

MANUFACTURERS OF  
"BEACH CARS"

EQUIPPED WITH  
"EDISON STORAGE BATTERIES"

July 12, 1910.

Mr F.L.Dyer,  
Vice-Prest. Edison Stg. Battry Co.,  
ORANGE NJ.

1779 HUDSON TERMINAL  
80 CHURCH STREET  
PHONE 3356 CORTLANDT

My dear Mr Dyer:

NEW YORK CITY

I am sending you herewith copy of the report made by the General Electric Company, as requested in your favor of the 11th, which you wish to send over to the German people.

Regarding the patents, I would suggest that you go ahead and make application in Germany, France and Great Britain; kindly instruct Mr Smith to go ahead with this and oblige,

Yours very truly,

FEDERAL STORAGE BATTERY CAR COMPANY,

*Roll Beach*  
*B*

ENCLOS.

[ATTACHMENT]

GENERAL ELECTRIC COMPANY,  
Principal Office, Schenectady, N.Y.

---COPY---

WEST LYNN, MASS.  
April 27, 1910.

Mr. R. N. Beach,  
10 Fifth Avenue,  
New York, N.Y.

*Beach*

Dear Sir:--

I am pleased to acknowledge your letter of the 21st in which you give information relative to the very satisfactory operation of the storage battery street car.

With reference to your inquiry on the controller, would advise that we are now proceeding to get out a design suitable for your work which we hope to have available in several weeks time. This controller will apply our continuous torque principle in which the current is never interrupted and the batteries will be placed permanently in series. There will be 6 speeds forward, the fifth of which gives you series parallel motor arrangement with series field shunted. On the first four positions the motors are kept in series, the first being resistance in circuit and the next three with straight series connection and with series field and shunted.

As soon as we have prepared a DS sketch showing the complete connections I will see that you are supplied with a copy.

I believe that this controller will give you much more satisfactory service on your car, permitting you especially to operate at a greater variety of speeds than the controller which you now have, and also prevent the excessive rush of current and the high wattage on the third position which you have secured.

I forwarded yesterday to Mr. C. B. Keys, of our New York Office, who will supply you with the information, complete data covering my recent investigation of the energy consumption on your car. The results show up very favorably on the second position with reference to watts per ton mile

[ATTACHMENT]

Mr. R. N. Beach

-2-

April 27, 1910.

On the third position there is a decided increase in this wattage which is, however, not unreasonably high.

Reviewing the proposition as a whole it seems very attractive and we see no reason why the storage battery car is not a commercial possibility.

You will no doubt hear from Mr. Eys relative to the data which I prepared.

If I can be of any further service to you along the lines of this proposition, or otherwise, I shall be pleased to hear from you

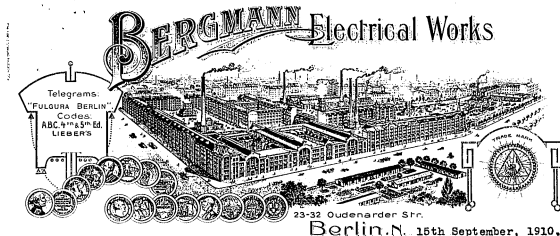
Yoursvery truly, (Sgd) H. S. Baldwin, per J.C. Clendenin,  
Engineering Department, THE GENERAL ELECTRIC COMPANY.

# [ATTACHMENT]

---COPY---

The tracks over which the car operates, on 28th and 29th Street cross town, pass for the most part through districts where the traffic conditions are very congested. The condition of the road bed in many places is also very rough and uneven which would render it difficult to get any consistent testing results. For this reason the tests were run on 11th Avenue near 23rd Street, on a level stretch of track, the rail surface of which was the same as that on which the car is normally operated. Runs were made both to and from 23rd Street, while the car was being driven on both the second and third notches of the controller, readings being taken with and without load. The records were obtained by a combination graphic recording voltmeter and ammeter, all reading being checked by portable instruments. The graphic recording instrument is provided with a marker electrically operated by dry cells, the circuit being closed by a contact which is fastened to the wheel making contact every revolution. Provision is made on the machine for indicating on a moving tape, a suitable mark at intervals of five seconds. The following results were calculated from data taken during the tests:

		TIME OF ACCEL-		MILES PER HOUR		TONS		WATTS CON-		TON TROLLER	
VOLTS	AMPERES	ERATION-	SECONDS	SPEED	WEIGHT	MILE	POSITION				
127	27	27		10.8	5.66	56	2nd	Acceleration			
								.400 miles per			
								hour per second			
								to 10.8 M.P.H.			
								Average accel-			
								erating current			
								61 Amperes.			
								7 Passengers on			
								board.			
-----											
116	72	21		15.5	5.66	95.2	3rd	Acceleration			
								.738 miles per			
								hour per second			
								to 15.5 M.P.H.			
								Average accelerating			
								current 140 Am-			
								peres. 7 Passen-			
								gers on board.			
-----											
114.5	82	23		15	6.4	98	3rd	Acceleration			
								.65 miles per			
								hour per second			
								Average accel-			
								erating current			
								167 amperes.			
								18 men on board			



MACHINE DEPARTMENT

*In reply please quote*

Bnn/Wt

Einschreiben!

Thomas A. Edison Esq.,  
Llewellyn Park,

Orange ..

-----  
New Jersey.

*Rodge*  
*file*

My dear Edison,

On his return Mr. Kammerhoff has reported to me regarding the new cells and the possibilities of the new battery, and I must say that I feel distinctly discouraged, in so far as it will still take a considerable time, and, last, but not least, very much more money, to achieve a final commercial success in this battery business.

It is of course understood that I never should have thought of starting manufacturing tube cells if I had had any idea of the great difficulties that have arisen and the enormous alterations which have been made all along.

This is far from trying to find fault with you, but we have to face the music and have to look this unfortunate state of affairs straight in the face.

BERGMANN ELECTRICAL WORKS (MACHINE DEPARTMENT).

-2-

Thomas A. Edison Esq. ,      Orange.

Our Shareholders, including the Deutsche Bank, have absolutely lost faith in our promises of five years' standing, but I cannot drop this business now and shut down on account of your and my name.

You have written in your letter to Mr. Kammerhoff that I should put my own money in the battery .      I want to tell you that I have only a certain amount of money to spend, and I have already invested over one million marks in your battery out of my own pocket, not counting the money I have paid, before I made the contract with you, to Dick and yourself.      I am not squealing, but I cannot do any more and invest any more money than I have already done.

I cannot pacify my stockholders as easily as you could yours at the time when you had to take over this whole business and fight it out with your own money.      We have promised them in your own writing at the time, as per enclosed copy, that it was possible to make a commercial success of this business, and it was only on the strength of this letter that I was able to form this three million mark company, as at the time and up to now nobody over here, no matter who it is, beside myself, would believe in the truth of the statements that have been made all along, and in the eventual success of the battery, but unless you will help me I am at my wits' end now.

I ask you now, to get this new battery started quickly, and, in order to show the stockholders and other people concerned over here the possibility of making this a commercial success, to send me the positive plates until we get fairly started with the new battery.

BERGMANN ELECTRICAL WORKS (MACHINE DEPARTMENT).

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-3-

Thomas A. Edison Esq., Orange.

I do not know yet how I can raise the money to do so, and therefore you had better help me along and send me the positive plates for about 4000 or 5000 cells, type A 6, in order to enable me to go ahead without investing too much money for new facilities. We need twenty batteries, complete, type A 6, in a hurry, each consisting of seventy-two cells, and if you send me the plates for these ahead of the others, I could put these batteries in service at the end of this year and in that way show the good results which can be obtained with your new cells, and the battery will then not be so expensive as if we imported it complete, which, owing to the heavy duties we have to pay, is almost impossible. I hope that, in this case, my shareholders will then be encouraged to go further ahead.

As our flake plant will not be ready for manufacturing on a commercial scale for the next three or four months, I would ask you to send us the quantity of flake which you promised Kammerhoff, i.e., enough flake to make about 20 to 25 cell A 4 per day, and also hydrate for the same number of cells. According to the figures and calculations which Kammerhoff has made out, I expect that we can obtain this flake from you at the price of 80 c. per A 4 cell, because in your last letter you tell me that your own costs are about 68 c. per A 4 cell.

Now, Edison, believe me, it is absolutely imperative that you should comply with the above request, in order to avoid absolute disaster in this unfortunate battery affair; please, therefore, telegraph me immediately on receipt of this letter that you have begun to send me the plates, flake, and hydrate in the above-named quantities.

BERGMANN ELECTRICAL WORKS (MACHINE DEPARTMENT).

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-4-

Thomas A. Edison Esq., Orange.

I sincerely trust you will now do as I ask you, so that we may at last be able to clear this situation up a bit.

Yours very truly,

*Bergmann.*



[ATTACHMENT]

Batter - Germany

C o p y.

O R A N G E, N.J. Oct. 1 1904.

Bergmann,

I figure out the profits which the German Co. will in all probability make

If the factory makes three hundred cells (18 plate) per day costing we will say \$ 6. -- per cell and selling for \$. 10.--, which is the price we sell in America, the gross profit for one year of 300 days should be \$.360,000.-. Deducting the royalty of 60 cents per cell amounting to \$.54000.- there remains \$.306000.- deducting six per cent dividend to the stockholders on the Capital which is \$.45000.- there remains \$.261000. One third of this amount going to German Co. is \$. 87000.-

Therefore the gross profit to German Co. is

6% Dividend	\$ 45,000
Proportion surplus profits	<u>\$ 87,000</u>
	\$ 132,000

approximately 17½ per cent on the stock. In my opinion the proposed capital is sufficient for a factory including chemical works for manufacturing 600 cells daily, in that case the surplus profits going to the German Co. would be twice as great.

Dividend 6%	\$ 45,000
Proportion of surplus profits	<u>\$174,000</u>
	\$ 219,000

or approximately 29% on the capital stock.

(signed) Thomas A. Edison.

[ATTACHMENT]

Ball - Eden

September 28, 1910.

Mr. Edison:

The cost of nickle plates, each 75¢, plus 20% - .90

Flake, per cell, 67¢, " 20% - .81

Hydrate, per pound, 58¢, " 20% - .70

DODGE

Pengman

Will ~~not~~ ship thousand plates ~~at the~~  
weekly starting October 10th, also  
flake and nickel hydrate. -

Edison

RECEIVED  
OCT 3 1910  
FBI NEW YORK

Sept. 25/10  
Rathenau, Wis. 6  
187  
My dear Mr. Gyer.

Received Mr. Edison's  
photo, alright for which  
we thank you.

Mr. Hammechoff  
reached here safely and  
we were over to see Mr.  
Burgermann. While we  
were there Mr. B. wrote  
a very long letter to Mr.  
Edison about the  
batter plant in general

as they didn't like the reports  
Mr. Hammerhoff brought back  
in regards to cost of cell, and  
expence of keeping up repairs  
on tools and machinery.

Mr. B. also wishes Mr. Edison to  
supply him with positive plate  
for tube cells, also nickel plate  
for about 20 to 25 cells a day  
and screened hydrate for  
the same amount of cells.

They have had quite  
some trouble with the nickel  
mix, which caused the cells to  
self discharge, but they found the  
trouble was in the washing of the  
graphite and are doing it better  
now. This has made them  
more anxious for the tube cell

Hoping you are all well.

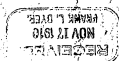
Yours Truly C. H. Rogers

197. Berlin E. Nov. 6<sup>th</sup>/10  
Dear Mr. Leyer ~~Dear~~  
Have not as yet  
started on the building  
for the crane for plating  
fluke, as I told you  
in my last letter that  
Mr. Bergermann was going  
to send it to the Battery  
Co., Mr. Bergermann has  
been away for the past  
week or a half, and I  
do not know when he  
will be back.

They are working at roll for  
large cell of 3000 amp. hours  
and there expecting an order  
from the Italian government  
for a battery for submarine  
boat which will amount to  
about  $\frac{1}{3}$  of a million marks  
of the tube type cell, and each  
tube plate will equal 1 a.  
six cells. They have been  
rather anxious about the plates,  
flake, and hydriat, from  
Glaugel, have received a cable  
it was shipped on the 5<sup>th</sup>.

Yours most Truly

G. Rogers





MACHINE DEPARTMENT

*In reply please quote*

Bnm/WH

Thomas A. Edison Esq.,

Orange.

New Jersey.

My dear Edison,

I am hearing great things about your new battery, and should be very glad if you would let me know what headway you are making.

We are pushing ahead with our preparations for the manufacture of the new type cells as quickly as possible. At present we are working on eight filling machines for filling the pockets, which are, of course, being built in accordance with the sample you sent me about eight weeks ago.

A few days ago I received the bills for plates and hydrate, but am very sorry that no flakes have yet arrived. As you know from my last letters, and also from the various letters written you by the Deutsche Edison Company, it is an absolute necessity for us, and of the greatest importance, that we should not only have hydrate, but also flake, as our flake plant cannot be in working order before the

**BERGMANN ELECTRICAL WORKS (MACHINE DEPARTMENT).**

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-2-

Thomas A. Edison Esq., Orange.

middle of next year. As you are aware, we have to build a special building for the flakes and to increase our power plant.

Unfortunately, in your bill for the plates, you do not mention whether you have now really sent me plates for type "A", which I need very badly, or whether these are for small type B 2 and B 4. In any case, I hope you will send more plates for the type A in the near future, so that I can hurry up and make some cells type A 6 and A 4 and endeavour to sell the same to our customers here.

It may interest you to know that the Italian Navy has lately been negotiating with us with a view to obtaining large cells for submarines. Last year you wrote me that you had given some of your type A cells, standard size, to the Italian Government, through their Ambassador in Washington, for testing purposes, and apparently the results obtained during these tests have been so favourable that the Admiralty now wish to try the cells in submarines.

For this purpose, it is of course necessary to build your cells of such a large size that at least 1200 amps. can be discharged continuously, that is, the cell must have a capacity of about 5000 amps. I sincerely hope we may come to some arrangement with the Italian Government, even if it takes some time before the large cells are ready for testing and use.

Enclosed I am sending you a translation of the Minutes of the Board Meeting of the Deutsche Edison Company, for your information.

BERGMANN ELECTRICAL WORKS (MACHINE DEPARTMENT).

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Thomas A. Edison Esq., Orange.

Our Exhibit at the International Exhibition at Brussels was both technically and commercially a great success, and we received eight Grands Prix. I enclose you herewith a few pictures of our stand, which may interest you. *Just enclosed*

I also had the great pleasure of meeting the German Emperor and Empress with their Suite. The Emperor paid my Works quite some compliments. I could not escape being snapshotted by Newspaper Photographers, when the Kaiser was in conversation with me. In the illustrated paper, "Die Woche", which I am sending you under separate cover, you will no doubt, if you have not lost sight of me entirely, be able to find my picture.

Hoping to hear from you soon, I am, with kind regards,

Yours sincerely,

*Bergmann.*

RECEIVED  
DEC 17 1918  
FRANK L. B. TIER

Berlin, Ger. <sup>1918</sup> Dec. 2,  
Pattinauer Str. 6  
My dear Mr. Liger  
I was over to <sup>the</sup> ~~the~~  
Mr. Bergermanns this  
morning with Mr.  
Hammerhoff and  
had a talk in general  
over the battery. Mr.  
Bergermann has de-  
cided to wait till spring  
before putting up the

Crane building for flake on account of bad weather for building, he is also going to put the building up in Rosenthal & rent it to the Battery Co., are going to build two apparatuses with double drums for slating flake and the one they have will make five drums which equals one half a crane which they will run night and day & with that and the flake they expect from Grange will keep them going till Spring when he can build.

The tube filling machines are being built at Bergermann works on account of large equipments of machinery.

The tools are completed for the tube cells and there remains very little for me to do, so Mr. Bergermann & Mr. Kamberoff decided to-day to let me

leave for home on the 22  
of this month. Battery bus-  
ness is picking up considerably  
especially on the small cells  
and they expect to deliver their  
first latex cats the 15 of Dec.

They have had the minutes  
of the meeting translated for  
McEldorn which they mailed  
this week.

Most Truly O. Rogers.

Bull Ed - Hand - 196 - Bull

My Dear Benjamin

Am  
11/22/10

Battery is progressing well  
our sales are at the rate of  
over one Million dollars  
a year & the prospects appear  
to be unlimited.

Our pioneering & experimental  
period is now over & we are  
going for cost reduction  
or I hope to very greatly  
reduce cost. We are assured  
by the government that they  
will ~~not~~ not renew any more  
lead batteries in the submarines  
& that all renewals will be  
made with our battery  
please keep this confidential

2

~~Now~~ The prices which we  
can get makes this branch  
very desirable, first cost  
of lead battery is less than  
 $\frac{1}{2}$  of ours but the cost  
per kilowatt year with ours  
is very much less

Regarding Tungsten wire  
the Genl Elec Co make it  
& believe I am told  
that the life of the filament  
is no better than the  
sputtered filament.  
If you could draw a sputtered  
filament through a Daphner  
die when white hot in a  
vacuum I think you would

3

get a fine filament, Tungsten filaments get very soft at high temperatures as you know, Sulfur would not melt,

I think Tungsten is the most priceable metal for you to use =

If you want to know how all the Tungsten filaments are made, have your clerk get a list of all English patents on filaments for lamps then send for printed copies of patents. The only way you can keep up

4

game is to organize a gang of 1 good experimenter + 2 or 3 assistants, + appropriate + definite sum of money yearly to keep it going to change the money to cost of production. Have every German + English patent sent them as soon as issued + let them experiment continuously to better your filaments + stick to Tungsten

I will sign

Battery  
TAE-

2

Benguerin -

I do not intend to make  $\frac{1}{8}$  tubes for anything except Racing & tub machines. The  $\frac{1}{4}$  tube is perfectly satisfactory for Autos & trucks and are cheaper to make than  $\frac{1}{8}$  = We are replacing Lead Batteries that cost \$175, in pleasure Autos with ours costing \$540. & everybody is satisfied. The 2 Mrs who are featuring our Battery are doing as much business as all the others using lead. ~~there is~~ ~~not~~ ~~difference~~ I will send you the charges for making the  $\frac{1}{8}$

tubes as soon as I get them so far only made a few by hand for test purposes,

Have just got order for a new use for Battery - On private yachts, the object to sound of Dynamite when laying in harbors at night. Say it disturbs sleep & want battery to replace Dynamite

I enclose some Talking points used by our Salesmen to meet the Talking points of our competitors, also latest course of life -

Billy Bee

Send me copy  
of all talking points  
up to date want  
to send to Bergman

5

Harry when you get them  
from Bee let me see them  
& then enclose them with  
Bergman letter & I will sign

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**END**

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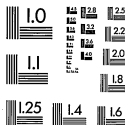
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